

CHAPTER 3

The Secret Program: South Africa's Chemical and Biological Weapons

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From the 1960s until the 1990s, apartheid South Africa was an isolated state that felt threatened by growing domestic unrest, as well as by a more powerful state actor, the Soviet Union, which was helping hostile regimes and liberation movements in southern Africa.

One response of the apartheid regime to changing threat perceptions outside and inside of South Africa was to develop a new and more sophisticated chemical and biological warfare (CBW) program, code-named "Project Coast," starting in 1981 or earlier, and to accelerate a nuclear weapons program. The focus here is on the especially sophisticated biological aspect of the program and how it developed. The CBW decision-making process was secretive and controlled by the military and enabled a very sophisticated program to be developed with little outside scrutiny. Military and police units used chemical and biological agents for counter-insurgency warfare, assassination, and execution of war prisoners.

As the regime felt increasingly threatened by opposition at home, top political leaders approved plans for research and development of exotic means to neutralize opponents, large-scale offensive uses of the program, and weaponization. However, the plans were not operationalized. The end of the external threat led to a decision to unilaterally dismantle the program, prior to a shift to majority rule. Lack of civilian control over military programs made the rollback difficult, rife with corruption, and left proliferation concerns in place.

Ultimately, the United States, the United Kingdom, and other countries pressured the South African government to ensure that the CBW program would be dismantled and the former project manager, Dr. Wouter

Basson, constrained. However, Basson secretly retained copies of Project Coast documents, which helped to perpetuate proliferation concerns.

Today, a divide exists between those who believe that South Africa developed the “second most sophisticated” CBW program, after the Soviet Union’s, and are concerned about proliferation, and those who believe that it was “pedestrian.” The former are focused on the proliferation danger, while the latter are focused on the criminality and corruption of the program.

Project Coast was not the first CBW program the South African government had developed. Between 1914-1918 and 1939-1945, South African troops fought in the two World Wars and faced the threat of CBW. Although the 1925 Geneva Convention banned the use of chemical and biological weapons in warfare, Japan and possibly the Soviet Union employed such weapons in WW II. As early as the 1930s, widespread evidence emerged of the efficacy of biological warfare (BW) based on scientific work conducted in the U.S., United Kingdom, and the Soviet Union.¹ The South African scientific and military communities kept pace with the various developments in CBW.

The literature on South Africa’s WW II CBW program was maintained.² Also, the South African Defense Force (SADF) maintained a small military program related to CBW research and development. The government also maintained funding for a modest number of basic research projects located in the Afrikaans universities and other government supported institutions. Much of this research was conducted under the umbrella of the Council for Scientific and Industrial Research (CSIR).

In the 1940s and 1950s, South Africa’s wartime connections with Britain and the United States continued. South African officers trained in Britain and the United States in chemical and biological warfare strategy and tactics.³ Also, in the 1950s, the Eisenhower administration initiated the United States “Atoms for Peace” program, which proved to be a significant factor contributing to South Africa’s later ability to produce nuclear weapons.⁴

From 1925 to 1963, South Africa was not willing to forswear CBW in combat situations. In 1963, South Africa belatedly became a party to the 1925 Geneva Convention, banning the use of chemical and biological weapons in warfare. South African accession to the Geneva Convention and ratification of the 1975 Convention on the Prohibition of the

Development, Production and Stockpiling of Bacteriological and Toxin Weapons and on their Destruction (BWC) did not deter apartheid leaders from continuing to develop a new and more sophisticated CBW program in the 1980s.

South African forces were reportedly involved in using CBW in counter-insurgency operations in southern Africa in the 1960s and 1970s, especially in Rhodesia. In 1978-1979, SADF Special Forces allegedly planted anthrax spores in grain fed to cattle in guerrilla-held areas. An anthrax epidemic afflicted nearly 10,000 cattle. South Africa had increasingly provided financial support and military hardware in the 1970s to the Rhodesian government, and SADF military intelligence was a principal source of funding for the Rhodesian counter-insurgency program, including the elite Selous Scouts. The Rhodesian defense budget was very small, and the regime had one rudimentary chemical and biological warfare plant that received outside aid from South Africa. In assisting Rhodesia, South African researchers continued work on CBW and land mine projects.

The collapse of Portuguese colonialism led, from 1974 to 1976, to the takeover of Angola and Mozambique by revolutionary communist regimes, backed by the Soviet Union and Cuba. Suddenly, South African leaders found themselves surrounded by communist forces, which were viewed as implacable and unscrupulous enemies. South African defense experts knew that the Soviet Union possessed nuclear, biological and chemical (NBC) weapons. In regard to the Soviet BW program, indications of its scale and sophistication had been gained during and after negotiations surrounding the 1972 Biological Weapons Convention (BWC).

According to former South African leaders and generals, NBC programs were developed with the intention of “countering the communist onslaught.” General (retired) Georg Meiring, former SADF Chief of Staff, commented that SADF sought protection against BW in the 1970s, as biological weapons became known as the “poor man’s atomic bomb,” and as the possibility increased of BW operations by Soviet-trained guerrillas of the South West African Peoples Organization (SWAPO) and African National Congress/Umkhonto we Sizwe (ANC/MK).⁵

According to Magnus Malan (SADF Chief of Staff, 1975-80 and Defense Minister, 1980-91), the U.S. encouraged the SADF to enter Angola in October 1975, and then abandoned South Africa to face Cuban forces

alone.⁶ In addition, South Africa faced the Soviet and Cuban NBC threat alone.

In 1976, the Soweto uprisings began, bringing a wave of unrest to South Africa, after more than a decade of relative calm. The 1976 wave of rebellion continued into 1977. Unrest would persist until 1984, when an even greater uprising commenced and lasted for more than two years and reverberated until 1990. The 1976 uprisings led the apartheid regime to search for ways, including the use of chemical agents, to control or incapacitate large groups of people.

In the wake of these regime-shaking events, the Defense Minister, P.W. Botha, replaced B.J. Vorster as Prime Minister in 1978 and initiated his vision of the “total strategy.” Botha differed from his predecessor in that he was oriented towards the military (and special forces), especially because of his years of service as defense minister. He initiated a range of reforms, combined with the widespread use of coercive power, to ensure the survival of the regime. Power was increasingly consolidated in the hands of the military and taken away from civilians.

In particular, Botha favored the development of advanced weapons projects and covert operations that would give South Africa additional advantages against its adversaries. South Africa initiated a series of internal and external military and paramilitary operations. These included assassinations, torture, and smuggling, as well as forgery, propaganda, and subversion. All were defined as “legitimate” weapons against the “total onslaught” of “red” and “black” forces. These practices were established at the top and legitimized deviant behavior throughout the military, police and intelligence services.⁷

Within the “any means necessary to survive” framework, preparations began to develop a chemical and biological warfare (CBW) program, called Project Coast, which would counteract and even rival the Soviet program. P.W. Botha and SADF Chief, Magnus Malan, directed the Surgeon General, Major General Nieuwoudt, to launch the program.⁸ Nieuwoudt enlisted a young military doctor, Wouter Basson, to be his lieutenant and program director. In the late 1970s, they approached South African university scientists and specialists in weapons development to determine if they would be willing to participate in and even lead the different components of a CBW program.⁹ They also began to make contacts in the international scientific community.

Project Coast, 1981-1993

From 1979 through 1981, the State Security Council, led by Prime Minister Botha and Malan, and the SADF discussed the principles that might apply to the CBW program. It became clear that a program to defend against a Soviet CBW attack could only be built if the Soviet offensive program was emulated and then tested.¹⁰ As it became evident that an offensive CBW program was to be developed, discussions began concerning the possible uses for such a program. Malan proposed that signs of a chemical warfare attack in Angola would force the Cuban and Angolan forces to don suits, which would cut combat effectiveness in half. In 1981, General Constand Viljoen, SADF Chief of Staff, requested that the CBW program provide SADF with agents for crowd control in South Africa. Other possible uses considered included counter-insurgency, assassinations, and black population control. It is noteworthy that, during the process of launching the CBW program, no delegation from South Africa appeared at the 1980 review conference for the 1975 Biological Weapons Convention.

In April 1981, a top-level SADF committee finalized the principles for Project Coast.¹¹ One principle was that chemical and biological warfare (CBW) should be treated as a top-secret matter, because it was susceptible to deception by adversaries. Another was that, since the West had supposedly fallen behind the Soviet Union, South Africa had to fend for itself in the CBW arena. The SADF committee decided that secrecy was essential and that South Africa would use front companies to research and produce chemical and biological weapons in top-secret installations. The desire for secrecy meant secret funding for the project, the creation of front companies, and the exclusion of the state arms producer (ARMSCOR) from the initial phases of the project. ARMSCOR would only be brought in during the weaponization phase of the program.

As Malan suggested, South Africa would experiment with a strategy of forcing the enemy in Angola to don protective suits. The CBW program would also investigate means of dealing with massive demonstrations, insurrection, and insurgency, as well as black population growth. Another principle was that biological warfare (BW) had to be used with caution. BW could be devastatingly effective and, therefore,

attractive. However, the regime was concerned that BW was difficult to control and that it could cause tremendous, plague-like damage.

In May 1981, the Surgeon General and head of the South African Medical Service (SAMS), Maj. Gen. Nieuwoudt, established Project Coast, and the Minister of Defense, Magnus Malan, and the Minister of Finance, Barend du Plessis, approved the Program.¹² Nieuwoudt made Dr. Wouter Basson the Project Coast director, as well as specialist adviser to the Surgeon General. Basson also became a lieutenant colonel, joined the 7th SAMS Battalion, and began making trips to Angola with the SADF. In addition, he continued making trips abroad to make contacts with scientists and to procure supplies for Project Coast.

In August 1981, the SADF launched Operation Protea in Angola. During the operation, evidence was discovered that the Cubans might be preparing for chemical warfare.¹³ Although the evidence was sketchy, top SADF generals chose to take action to counter CBW anyway. Defense Minister Malan took SADF generals to Angola to examine CBW protective suits and demonstrate problems that they created during combat. Afterwards, Malan reiterated his proposal that the SADF take measures that would force the Cubans rather than the South Africans to don suits. Accordingly, the SADF developed a strategy of deception, by firing “smoke” that would achieve such a result. In addition, Malan proposed that the CBW program be developed to counteract the ANC/MK, which was in the process of escalating a revolutionary war with more than 3,000 guerrilla forces. The SADF had evidence that some of the ANC/MK troops had been trained in the Soviet Union in CBW techniques.¹⁴

Basson was ordered to develop Project Coast by a “kitchen cabinet,” composed of Minister of Defense Malan, SADF Chief (Gen. C. Viljoen), the Commanding Officer of Strategic Intelligence and Special Forces (Gen. K. Liebenberg), South African Police (SAP) Commissioner General van der Merwe, and the Director General of the National Intelligence Service (NIS). Basson was placed in charge of managing all aspects of Project Coast, including defensive and offensive measures.¹⁵ The annual budget for Project Coast was estimated to be \$10 million, with a staff of 200 involved.¹⁶ Members of the Project Working Group included Surgeon General Nieuwoudt and his deputy and successor, Dr. Niels Knobel. They were supposed to supervise Project Coast, but Knobel has claimed that

they would rarely visit the front companies for fear of compromising their cover. Basson decided with the scientific researchers on requirements and costs. Much of Basson's efforts went into circumventing sanctions against the sale of military-related items to South Africa and into black market, sanctions-busting activities. All procurement was undertaken by Basson and signed for by Nieuwoudt and his successor, Knobel, who has claimed that he and Nieuwoudt were only told after the fact about Basson's activities.

The problem of procurement by SADF was the lack of civilian leadership and supervision. The SADF was still supplied with uniforms using 1930s regulations. A Special Defense Account was established by the SADF that precluded access by the Auditor-General.¹⁷ Thus, while Wouter Basson was required to provide records of financial expenditures for Project Coast activities, there was no effort throughout this period to match these records with those of covert special operations.¹⁸ The rationale of the need for secrecy for covert programs and Basson's unsupervised activities would lead Project Coast into a morass of corruption.

In 1982, the Delta G Scientific Company began work on chemical warfare agents for Project Coast. The chemicals that Delta G developed for testing were divided into lethal, incapacitating, and irritating agents. Roodeplaat Research Laboratories (RRL) then tested the biological effects of the agents from Delta G. RRL was the company that was primarily responsible for biological warfare. Protechnik Company was to develop the protective CBW equipment.

In 1983, RRL opened and started research on biological agents and on the biological effects of chemical agents. Daan Goosen became the first head of RRL and served until 1986. According to Gen. (ret.) Georg Meiring, South Africa developed a sophisticated and dispersed project. Project Coast was not just one individual and was not just RRL.¹⁹ There were a number of different research and testing centers at universities and companies, and scientists in various parts of South Africa assisted Project Coast.

Anthrax, cholera, botulinum, and a variety of pathogens were collected and/or developed at RRL and elsewhere for testing. Apparently, a principal objective was to collect and test a range of biological agents in order to develop protection from a Soviet BW attack. In 1984, Dr. Schalk van Rensburg joined RRL and started the cholera research program. By

the end of 1984, Project Coast and RRL had tested a range of BW toxins and had developed countermeasures to ricin and botulinum. Reportedly, they had acquired anthrax, Plague, cholera, E. coli, staph, necrotizing fasciitis, ricin, botulinum, gas gangrene, anti-matter bacteria, and the Ebola, Marburg, and Rift Valley viruses.²⁰ However, one must question if RRL had the facilities to keep Marburg, Rift Valley, and Ebola viruses.

Eventually, according to a number of sources in the U.S. and South Africa, Project Coast developed pathogens that had never before been seen. Project Coast managed to obtain the Soviet-developed flesh-eating bacteria, necrotizing fasciitis, as well as the antidote. In 1994, the South Africans surprised the Americans by revealing that they had the bacteria and then gave it to the U.S.²¹ However, claims by Basson and former Surgeon General Knobel that South African espionage agents penetrated Soviet Russian programs during 1980s remain to be proven.

According to Tom Mangold in *Plague Wars*,²² baboons, trapped up-country in Kruger National Park, were shipped by crate load to RRL for biological tests. There is evidence that some of these tests were done in the park itself. Tourists reportedly witnessed researchers using poison darts that took several hours to incapacitate or kill primates. The tourists registered their complaints and demanded that the practice be terminated. According to the Chief Warden of Kruger Park, the SADF used Kruger and other parks for military tests. However, Kruger Park officials were not told what was being tested, only what areas would be restricted and for how long. His impression is that more sensitive tests occurred on private reserves or Cape testing areas.²³

It appears that, from the start, Project Coast was not just a defensive program.²⁴ In the early 1980s, fears of a “black tidal wave” drove white scientists to try to develop a variety of means that could ensure the survival of white South Africa. Plans were devised to build a large-scale anthrax production facility at RRL. The anthrax could have been used either outside or inside South Africa, particularly where guerrillas were present. According to former RRL scientist, Mike Odendaal, who testified in the Basson trial, those plans were nearly operationalized in 1985.

Also, reportedly part of Project Coast was genetic engineering research, which was being conducted to produce a “black bomb,” bacteria or other biological agents that would kill or weaken blacks and not whites. The black bomb could be used to wipe out or incapacitate an entire area

where an insurrection was taking place.²⁵ Project Coast scientists asked Basson to obtain a peptide synthesizer outside of South Africa that would assist in genetic engineering efforts.

Many aspects of Project Coast research projects, including the country's links with other states, have not and may never be uncovered. Research on birth control methods to reduce the black birth rate was one such area. Daan Goosen, the managing director of Roodeplaat Research Laboratories between 1983 and 1986, told Tom Mangold of the BBC that Project Coast supported a project to develop a contraceptive that would have been applied clandestinely to blacks.²⁶ Goosen claimed that Dr. Knobel knew all about this project and those scientists had been told that this was the most important research on which they could work. Goosen reported that the project had developed a vaccine for males and females and that the researchers were still searching for a means that it could be delivered to make blacks sterile without making them aware.²⁷ Testimony given at the Truth and Reconciliation Commission (TRC) suggested that Project Coast researchers were also looking into putting birth control substances in water supplies.²⁸

Project Coast claimed its first victims at the end of 1982, when "Operation Duel" was launched, which aimed to eliminate hundreds of SWAPO prisoners and SADF informants.²⁹ Col. Johan Theron, Counterintelligence Officer in the Special Forces, testified at the Basson trial that he received muscle relaxant pills from Basson in December 1982 and killed approximately 200 SWAPO prisoners, then dumped their bodies from airplanes out to sea. Also in Namibia, the Soviet Union accused South Africa of using herbicides. Napalm and phosphorous were allegedly used by the SADF in Angola during the 1980s, actions that violated the 1925 Geneva Protocol.

In November 1983, Basson was allegedly involved in the use of CBW against regime opponents in Dukuduku in KwaZulu-Natal. There he instructed South African agents to tie their intended victims to trees and smear a jell-like ointment on their bodies. When that failed to kill them, they were allegedly injected with an anaesthetic drug and then a muscle relaxant. After they had died, their bodies were thrown into the sea.

In 1985, four SWAPO detainees held at Reconnaissance Regiment headquarters were allegedly given a sleeping drug in soft drinks, taken to Lanseria airport outside Johannesburg and injected with three toxic

substances supplied by Basson. Their bodies were thrown into the Atlantic Ocean.

In 1986, Basson is also alleged to have supplied poisoned tea and oranges that killed Special Forces member Lance Corporal Victor de Fonseca in a military hospital in Pretoria. Fonseca is said to have started “talking” about clandestine operations after developing brain cancer. These acts were part of the 16 murder charges introduced on 26 March 1999, prior to the October 1999 opening of Basson’s trial in South Africa.

In 1984, uprisings in South Africa started in the Vaal Triangle, south of Johannesburg, and spread throughout the country. The mass actions were far more widespread, violent and deadly than in 1960 or after 1976. The nationwide scope of these protests intensified concerns over crowd control and fueled ongoing efforts to develop weapons, including chemical and biological agents, to deal with the unrest. SADF Chief of Staff, General Constand Viljoen, as well as Generals Liebenberg and Meiring, were seeking an offensive CBW substance that would weaken and incapacitate rioters and was less irritating than tear gas. They consulted Basson and Project Coast. Also, the SADF sought a chemical that would color the skin for about two weeks and allow the identification of frontrunners in the violence.³⁰

By 1985, several Project Coast program directors were planning for a massive escalation of the chemical and biological agents production program and working on plans that would have resulted in a weapons program. According to RRL scientist Mike Odendaal, he had received instructions to start a factory where biological agents would be produced in mass form, and 200,000 rand (\$100,000 in 1985 U.S. dollars) had already been spent on the plans.³¹ A new wing had been added to Roodeplaat Research laboratories for a production-scale laboratory, with fermenters that could produce 300 liters or more of anthrax and other biological agents and a P-4 level laboratory. For the first few years, Project Coast used P-2 to P-3 facilities, and RRL only used two 10-gallon fermenters for growth medium. In 1985, when the new wing for RRL was built, a P-4 facility was added. Basson and his superiors in the SADF (Generals Liebenberg, Nieuwoudt, and Viljoen, as well as Magnus Malan) approved the upgrade.

According to RRL scientist Schalk van Rensburg, when Basson wanted the safety level raised to level 4, two British scientists, on an

unauthorized visit from Porton Down, U.K. (which had been privatized) helped and advised.³² According to Tom Mangold, MI-6 opened a file on Basson after he attended the Second World Conference of Toxicologists in Ghent, Belgium, where he reportedly met with scientists, including some from Porton Down.³³ Consequently, both American and British intelligence agencies knew of Basson's activities during this time but did little against him. However, there is no evidence, besides Basson's claims, that Basson ever visited Porton Down.³⁴

In the end, the directors of Project Coast decided not to fund the larger fermenters. According to Odendaal, SADF decided that biological agents would be used in low intensity regional skirmishes and assassinations, but not on a more massive scale.³⁵ Therefore, in comparison to the USSR, which had scores of big fermenters, the South African program was quite small in size and scale. However, according to many American and South African experts, in terms of the range of biological agents possessed and the science involved, the CBW program was the "second most sophisticated program," next to the Soviet program, and more sophisticated than the Iraqi program that was uncovered in 1995. In our interviews, no comparisons were made with the U.S. program that existed until 1969.

A senior former army officer confirmed that "any thinking person in the SADF" knew that South Africa had developed chemical weapons, at least by the mid-1980s." He confirmed that South Africa was manufacturing chemical weapons from the mid-1980s until the "whole scenario changed" in the early 1990s.³⁶ Earlier, the army had spent most of its time testing decontamination gasses. Also, at this time, several public statements about developing methods to counter chemical attacks appeared.

Weaponization began in cooperation with ARMSCOR, the state-owned arms producer, which developed unmanned aerial vehicles (UAVs) and missiles that would have the capability to carry chemical and biological agents. All of this was top secret, and the Americans and British only discovered weaponization in 1994. They did not insist that weaponization be included in the chemical and biological memorandum because they had no hard evidence upon which to make such a demand.³⁷ The South African Ministry of Defense still denies that weaponization took place.

While reports that the former South African government tested battlefield weapons capable of carrying biological agents and chemicals cannot be confirmed, there is evidence that such weapons were developed. Basson, much like his counterparts in other countries (e.g., Iraq), had difficulties developing effective delivery systems for using biological agents in mass casualty weapons. While Project Coast researchers undertook conceptual studies in the aerosolization of biological agents, the evidence available to date indicates that sophisticated aerosolization delivery systems were not developed. However, conceptual studies of such systems were well underway at the time Project Coast was shut down. Much more progress appears to have been achieved developing sophisticated artillery warheads and tactical missiles that were capable of delivering NBC warheads. What types of missiles and warheads were built, possibly tested and sold abroad remain among the most important questions related to South Africa's NBC programs still to be answered.

International Links Established during Project Coast

From 1981 onwards, Basson and Project Coast scientists intensified their international contacts, particularly at conferences on CBW. South African delegations made visits to the U.S., Britain, Taiwan, Israel, and Germany. Basson attended a conference on biological warfare (BW) in San Antonio in 1981. From 1981 to 1986, the Reagan administration followed a policy of "constructive engagement." Reagan administration officials sent signals to the Botha regime that the U.S. was willing to turn a blind eye to American industries and scientists as the South Africans built up their defense industries. Under-Secretary of State William Clark went one step further and welcomed South African defense officials and experts to Washington and facilitated their interaction with U.S. counterparts. The attitude of Clark and others enabled South Africa to gain access to U.S. scientists. At the same time, Basson's trip to San Antonio reportedly attracted the attention of American intelligence, and he was barred entry to the U.S. for scientific purposes.³⁸

In 1984, the U.S. Centers for Disease Control (CDC) sent eight shipments of the Ebola, Marburg, and Rift Valley viruses to South Africa. The CDC was concerned with outbreaks of Ebola and other viruses and

sought South Africa's assistance in preventing their spread. While CDC motives were benign, suddenly, South Africa possessed viruses that could be used with devastating effect in surrounding countries.

Details of the extent and importance of South African cooperation with Israel in CBW research have not been disclosed. The two countries started working together on covert research related to nuclear weapons after World War II. These links had developed into a mature working relationship by the 1970s. Bilateral cooperation between the two states proved especially fruitful in developing nuclear weapons and testing a number of increasingly sophisticated missiles. Israel and South Africa also cooperated closely in the production of the G-5 artillery gun to fight a conventional war.³⁹ This line of research that cost millions of rand also explored the feasibility of using NBC warheads for the G-5, and later the G-6 gun. The Israelis also helped South Africa with armored cars and tanks and the Cheetah (a Mirage offshoot). Given the breadth and depth of cooperation, it is quite possible that Israel and South Africa cooperated on CBW efforts. It is significant that Basson went to Israel several times during the 1980s.⁴⁰

New questions surfaced about the apartheid government's international connections and interest in biological warfare and birth control methods in early 2000, after Dr. Larry Ford committed suicide in Irvine, California. Local authorities and the FBI launched a weapons of mass destruction investigation into the Ford case and began investigating claims Ford made to his associates and friends that he served as a consultant to the SADF and had close ties with the CIA. According to Dr. Scharf, the former head of Military Hospital One in Pretoria, Ford visited in the mid-1980s as a guest of the South African Surgeon General. Dr. Scharf remembered a visit by Ford to his hospital as the guest of Knobel in 1984 or 1985. Knobel insisted that Ford be given VIP treatment (at the hospital's expense). Scharf was offended by Ford's request for human placenta that he wanted to use in his research on viruses. Scharf refused to cooperate and claimed that he threw Ford out of his office, after warning him that such activities would be very controversial, if they became public, due to the fact that all Africans viewed babies as sacred.⁴¹

According to microbiologist Mike Odendaal, researcher at RRL, Ford also visited South Africa again in 1987 to instruct scientists

working with a SADF front company on how to turn teabags, doilies, and pornographic magazines into “weapons” that could be used against the ANC by using species of clostridium bacteria. Odendaal reported that the scientists found much of Ford’s advice confusing and some went so far as to call him a fraud.

Police investigating this case have been unable to corroborate many of Ford’s claims made before his death. For example, Ford claimed that he parachuted into southern Africa during the apartheid era to take blood samples from dead guerrilla fighters in order to help the U.S. government determine the biological warfare agents against which the Soviets were vaccinating their allies.⁴² Another long-time associate of Ford claimed that only about one per cent of the story of Ford’s activities in Africa has been disclosed.⁴³

The results of a closed grand jury investigation of the Ford case have not been made public, but the discovery of biological agents and toxins in Ford’s possession renewed questions about whether Basson called upon former associates to conceal biological agents, poisons and drugs overseas. Testimony at the Basson’s trial to date has failed to explain where tons of drugs and smaller quantities of deadly toxins whose production Basson oversaw before his retirement from the military in 1993 went and why so many drugs were produced in the first place. One of the prosecutors in the Basson case has acknowledged that the prosecution still does not have a very clear idea about either the purpose of the drugs or their final destination.⁴⁴

At the time of Basson’s arrest, investigators found several trunks in his possession that contained documents and items related to Project Coast.⁴⁵ The investigators also found in the trunks and among Basson’s personal effects a great deal of personal correspondence between Basson and individuals in Switzerland, the United Kingdom, and other countries. One letter was from an individual in the U.K., who lived near Heathrow Airport. This letter described what Basson should do if he needed to leave South Africa quickly. The letter said he should contact “them” when he arrived at Heathrow and that “we will collect you.” Other letters, from individuals in other countries, described similar emergency exit plans.

The documents are interesting, given statements made by Juergen Jacomet, a former Swiss military intelligence agent, who worked with

Basson on money-laundering for Project Coast in Europe. He spoke of a right-wing conspiracy and alluded to the existence of an information organization of individuals, including Americans.⁴⁶ The death of Dr. Ford and revelations of his South African involvement, and his failed effort to establish the Lake View Terrace Institute raised again the possibility of a right-wing international network, united by a vision of a South Africa once again ruled by whites.

No evidence to date has been found to substantiate concerns expressed by some about possible linkages between Project Coast programs and the intentional use of HIV or microbicide contraceptives.⁴⁷ However, the recent revelations since Ford's death have been consistent with reports that the former South African government was already concerned about the future impact of the AIDS epidemic by the mid-1980s. In the 1980s, as the South African government became more aware of the magnitude of the impending AIDS epidemic, the SADF started testing thousands of SADF soldiers for HIV. The secret right-wing *Afrikaner* organization, the Broederbond, also recently acknowledged that they had completed population projections during the mid-1980s. They suggested that whites would be in majority in the future due to the devastating effects that AIDS was projected to have on the black population of South Africa.⁴⁸

Throughout the 1980s, Basson continued his foreign visits and interaction with experts from the U.S., the U.K. and other countries. Most contacts appear to have been legal ones between Project Coast scientists and other scientists and consultants in Europe. Most of the substances and knowledge relevant to biological weapons were not controlled in the 1970s and 1980s as there was not the same level of concern with the possible use of biological agents and chemical substances that emerged during the 1990s.⁴⁹ However, Basson and Knobel subsequently claimed that Basson visited Iraq and Iran, the Philippines, North Korea, and Croatia, and met with members of Colombian drug cartels, making contacts and collecting information. What was obtained or exchanged during these visits has not yet emerged.

Project Coast ground to a halt in 1988, due to corruption by Basson and others. According to interviews with Project Coast scientists, between 1982 and 1987, Project Coast was advancing as a sophisticated program.⁵⁰ Project Coast had acquired anthrax, cholera, botulinum, and other biological agents,

was planning to add a wing to RRL to produce massive amounts of anthrax, and was proceeding with genetic engineering research to produce germs that would harm blacks and not whites. However, as the communist threat receded in 1987-88, and as it seemed possible that the apartheid regime's days were numbered, Basson and others allegedly took large amounts of money that was intended for Project Coast programs and diverted it to their own accounts. Elsewhere in government, top officials were taking funds on a large scale. As the biological warfare program stopped, Basson and others began to plan how to roll Project Coast back in such a way that would be advantageous to them. By 1988, President P.W. Botha, Magnus Malan and Wim de Villiers of ARMSCOR had initiated the privatization and liberalization of the defense industry. They envisaged a transfer of power to Mandela and the ANC and saw the need to keep the defense industry out of their hands. The privatization process opened the door to the type of corruption exhibited by Basson and his colleagues.

In 1988, Basson was supposed to have bought a sophisticated peptide synthesizer for \$2.2 million from clandestine sources. Project Coast researchers were attempting to make significant advances in the field of peptides to alter brain function, which was a key to creating a biological weapon that would affect blacks and not whites. However, at the trial of Basson, Dr. Lucia Steenkamp, a Project Coast scientist, refuted claims that Basson had bought the peptide synthesizer, and the prosecution alleged that Basson defrauded SADF by pretending he needed the synthesizer but actually used the money for overseas business deals.⁵¹

Rollback of Project Coast, 1988-1994

In 1988, conditions for the rollback of the CBW program, Project Coast, improved dramatically, as the pace of change accelerated in South Africa and southern Africa. President P.W. Botha and the South African Defense Force (SADF) realized that the Soviet Union was crumbling and knew they were going to win against the Cubans in Angola.

Suddenly, P.W. Botha changed his position and accepted a change in strategy. The goal became minimal destruction, using cross border raids, and not defeat of the regime's adversaries. As Botha realized there was a greatly reduced external threat, he agreed to enter into negotiations, which

had started at a lower level in 1986, to reach a compromise with Nelson Mandela and the ANC. In 1988, the U.S., Cuba, Angola and South Africa negotiated the withdrawal of Cuban troops in exchange for the independence of Namibia, and by the end of the year, a deal was reached. The Soviet and Cuban threat that had helped give rise to Project Coast rapidly began to recede. However, the ANC/MK continued their guerrilla campaign, including the bombing of civilian targets.⁵²

At the beginning of 1989, President Botha suffered a stroke and was replaced on an interim basis by F.W. de Klerk, an “outsider” to the state security system (including Project Coast). In April 1989, South African troops were confined to barracks in Namibia and were withdrawn by the end of the year. In September 1989, de Klerk was elected and inaugurated as State President and shunted Botha aside. De Klerk began his own five-year plan of ending apartheid. Part of his task included trying to establish civilian control over the security apparatus and reining in the “securocrats” and secret projects (like Project Coast). Talks with Mandela reached their climax, and top ANC prisoners, such as Walter Sisulu, were released. Finally, in February 1990, de Klerk lifted the ban on the ANC, Pan Africanist Congress of Azania (PAC), and South African Communist Party, and released Nelson Mandela.

De Klerk’s decision to release Nelson Mandela and lift the ban on the ANC initiated a four-year period of negotiation and contention. During this period of negotiations, instability and violence, many in the regime believed that they needed insurance against the ANC/MK and the “black onslaught.” With this in mind, the CBW program was kept intact by Basson and his associates as insurance and was used in assassination attempts. Also, experiments with chemical warfare apparently continued, with an alleged attack on Mozambican troops as late as January 1992. At the same time, Basson, Philip Mijburgh and others were dismantling Project Coast, privatizing its companies, and allegedly accumulating large sums of money.

Basson began to establish contacts with foreign governments, such as Libya, which might be interested in purchasing CBW secrets. Soon, Basson became the target of investigation from the National Intelligence Service (NIS), SADF counterintelligence, and the Office of Serious Economic Offenses, as well as the CIA and MI-6. The investigations culminated in the Steyn Report of December 1992.

After de Klerk lifted the ban on the ANC and freed Mandela, he addressed the SADF and SAP. De Klerk stressed that the ANC was now a party and not the enemy. Needless to say, many in the security forces did not like the message. On 26 March 1990, President F.W. de Klerk was briefed by Surgeon General Knobel about the defensive side of the CBW program, such as gas masks and protective suits. Knobel informed de Klerk about work with lethal chemical agents, and in response, de Klerk ordered Knobel to stop work on the lethal agents. However, de Klerk was not provided with all of the details about Project Coast, especially about the offensive aspects of the CBW program and its use in assassination activities. The same was true with other SADF projects and “third force” activities.⁵³ Only with the Steyn Report at the beginning of 1993, did de Klerk become aware of the sophistication and offensive nature of Project Coast.

At the end of 1989, the U.S., backed by Britain and Israel, issued a strongly worded warning to South Africa on rolling back the nuclear weapons program.⁵⁴ With the prospect of the ANC taking power, the U.S., the U.K. and Israel did not want to see the program’s assets or secrets being sold to adversaries in the Middle East or elsewhere. De Klerk was persuaded by the ultimatum, especially as he saw no future need for nuclear weapons. In addition, South African officials were being forced by the U.S. to take a stand on the Non-Proliferation Treaty (NPT), in time for the June 1990 NPT review conference. According to Prof. Andre Buys,⁵⁵ in late 1989, de Klerk decided to end the nuclear program.

In contrast to the nuclear weapons program, no pressure was exerted in 1989 or 1990 over the CBW program, even though the CIA released a report in 1989, which placed South Africa on a list of countries that had developed and stockpiled chemical weapons. However, the main focus of concern for the United States and her allies was nuclear proliferation. For a brief time, between 1987 and August 1990, when South Africa sold the G-6 155mm gun and chemical warfare agents, including NGT (CR) gas (New Generation Tear Gas), to Iraq, the United States became concerned about the proliferation of a conventional weapon that had the capability to throw “exotic” shells.⁵⁶ However, there was little or no interest among U.S. policy and intelligence communities about possible proliferation threats associated with South Africa’s biological warfare program.

The information the CIA and MI-6 possessed was widely circulated and available within the Bush administration and Major government. This lack of interest changed in 1993, as the U.S. learned more about South Africa's CBW and missile programs. Wouter Basson's trips, particularly to Libya, and access to an informant, who provided the U.S. and allies with key details of Project Coast, increased the interest and concern of the United States, Great Britain and other allies. The new information led the U.S. and Britain to issue a *demarche* in April 1994. Israeli officials probably knew more about the program but did not want the U.S. and Britain to know that they were involved with it.

In 1991, U.S. embassy officials, including the defense attaché, discovered at an arms show that South Africa was running a CBW program, including gas masks and protective suits.⁵⁷ The Americans asked the South Africans about the CBW gear but elicited little response. Later, an American delegation was invited to visit Protechnik to view facilities producing CBW protective gear. By September 1991, the U.S. government (and not just the CIA) became aware of Basson and Project Coast and began to look for signs of proliferation, especially to ANC allies, such as Libya.

In 1989 and the early 1990s, violence escalated inside South Africa, in spite of the unbanning of the ANC and the release of Mandela. The ANC/MK reserved the right to resume their urban guerrilla warfare campaign, and violence between ANC and Inkatha supporters escalated in KwaZulu-Natal. In this atmosphere of violence, "third force" agents intensified their activities. The most notorious covert operations unit was the Civilian Cooperation Bureau (CCB).

In April 1989, the CCB attempted to assassinate the Reverend Frank Chikane with poison during a trip to Namibia. Another attempt was made during a trip to the U.S., where one doctor finally diagnosed his malady as organophosphate poisoning. According to the testimony of RRL scientist, Schalk Van Rensburg, to the TRC, the men who tried to kill Chikane with Parathion had poor intelligence. He stated, "They were counting on little (*sic*) forensic capability in Namibia. And too little was smeared over his underwear to kill him when he went to the U.S."⁵⁸ Chikane's attempted assassination and several other CCB incidents illustrate the difficulties involved in using biological agents as methods of assassination.⁵⁹

CCB operative Petrus Jacobus Botes (who claimed to have also directed operations by the CCB in Mozambique and Swaziland) asserted that he was ordered, in May 1989, to contaminate the water supply at Dobra, a refugee camp located in Namibia, with cholera and yellow fever organisms. A South African army doctor provided them to him. In late August 1989, he led an attempt to contaminate the water supply. However, the attempt failed to have any effect because of the high chlorine content in the treated water at the camp.⁶⁰

In May 1990, a South African newspaper, *Vrye Weekblad*, reported that the CCB had employed biological agents against SWAPO members. Reportedly, the CCB had nearly 300 people working for it, and reportedly consumed about 0.28 per cent of the entire South African defense budget. Reportedly, the group had authority to operate inside South Africa and in neighboring countries and was disbanded at the end of 1990.⁶¹

In 1990, violence in KwaZulu-Natal and other parts of South Africa escalated, with assistance provided to Inkatha militants from the CCB and other “third force” agents. In response to rising evidence of “third force” activities, the Harms Commission was established in 1990 and was charged by President de Klerk with investigating “third force” agencies, including the CCB and *Vlakplaas*.

The January 1993 Steyn Report was the most ambitious attempt to uncover the secret projects of the SADF, including Project Coast, with the aim of helping to restore civilian control over the military. On 18 November 1992, de Klerk appointed Lt. Gen. Steyn to investigate SADF secret projects, including Basson and Project Coast and “third force” activities around the country. As a result, de Klerk learned of the activities of Basson, Project Coast, CCB and other covert units.⁶²

The CIA and MI6 were concerned and were in touch with the NIS. While the different organizations often had to rely upon information obtained from the same source, it was probable that the information that they received was valid. The NIS had been conducting its own intelligence operation since 1989, investigating the SADF and SAP secret projects. Targets for investigation included Project Coast and Basson, as well as Jan Lourens and Brian John Davie of Protechnik, who were involved in the CBW experiments.

The Steyn team quickly investigated projects that needed to be stopped. However, financial misdealings were not examined.

Investigations went smoothly, until the first report was completed and issued on 20 December 1992 and landed on de Klerk's desk at the beginning of January 1993. President de Klerk decided that firm and decisive action was needed, even though there was no conclusive evidence. In mid-January 1993, de Klerk called Liebenberg in again and announced that he had changed his mind and that he wanted to act assertively. He would fire the generals responsible for the CCB and other secret projects. De Klerk asked Liebenberg to ensure that the SADF policed itself. Subsequently, de Klerk launched another, more random investigation. Instead of acting against Liebenberg and van der Merwe, de Klerk let Liebenberg off the hook, and Liebenberg was not obliged to report back. De Klerk did not even confront the SAP's van der Merwe about the activities of the CCB unit of the SAP and its notorious leader, Eugene de Kock. As a result of the second investigation, 27 generals retired early. Col. Dr. Basson was required to leave the SADF at the end of March 1993 and was given a "soft retirement" and reserve status.⁶³

The Steyn Report found that Project Coast was offensive in nature and that Basson, RRL, Delta-G, Medchem, and SADF were all operating completely outside the purview of the civilian government. The SADF was compelled to create an offensive CBW program in order to test defensive measures, and the lack of civilian control meant that the program was used as only a few top SADF leaders saw fit. According to this report, starting in 1985, the ANC and MK escalated their campaign of violence to include civilian targets, and the SADF and SAP retaliated by using methods, such as CBW. These persisted, despite later efforts made to assert civilian control. Gen. Liebenberg and Gen. Meiring, in particular, knew about SADF secret programs, including Project Coast, and took an assertive hand in running them. Gen. Liebenberg signed for Project Coast activities and so did Surgeon General Knobel.

Upon receiving Steyn's report, de Klerk finally ordered the destruction of all lethal and incapacitating CBW agents, as well as an end to such research and operations. He also forced the retirement of Basson at the end of March 1993. In January 1993, the Minister of Defense, Kobie Coetzee, acting on de Klerk's order, authorized all CBW research and development stopped. Project Coast documents containing formulas and experiments were to be transferred to CD-ROMs.

According to Dr. Kobus (Jack) Bothma, in testimony at the Basson trial, an office secretary scanned in the documents from Project Coast onto CD-ROMs. Philip Mijburgh transferred the CD-ROMs to the Ministry of Defense, where they were placed in the vaults, and President de Klerk was given a key to the contents, so that only the State President could open it, along with the Surgeon General, and head of the NIS, Niel Barnard.

Although it seemed that Project Coast had been rolled back, Mijburgh issued destruction documents that were inconclusive. While the South African government believed that it had rolled back Project Coast, four years later, in January 1997, police investigators found that Basson had taken copies of Project Coast documents home and hidden them in trunks.

Whether all CBW agents were destroyed at the beginning or end of 1993 remains a matter of opinion. Also, large quantities of drugs were unaccounted for and were either in possession of Basson or were secreted elsewhere. According to General (ret.) Meiring, all CBW agents were dumped out to sea at the end of 1993. The Forensic Branch of the SAP, headed by SAP General Lothar Neethling, placed all agents destroyed on a schedule. The agents were dumped 200 nautical miles south of Cape Argulhas. While lethal CBW agents were destroyed, the irritants, including NGT (CR) gas, were kept.⁶⁴

According to Dr. Knobel's testimony to the TRC, SADF Counterintelligence destroyed all CBW agents in January 1993. Methaqualone purchased in Croatia was allegedly destroyed then, after the order was received that work on all incapacitants should cease.

On 7 January 1993, Dr. Knobel advised his superiors that South Africa "should conceal" NGT (CR) gas from the inspectors of the Chemical Weapons Convention (CWC). On 14 January 1993, South Africa formally acceded to the CWC. However, work on the dispersion of NGT (CR) gas continued.⁶⁵ By March 1993, de Klerk publicly announced that South Africa had dismantled its six nuclear weapons in 1991. By the end of 1993, the South African missile program was rolled back.

On 31 March 1993, Basson was retired by President de Klerk from the SAMS and became a reservist. Basson had also been ordered to destroy Project Coast documentation. However, Basson did not follow, to the letter, the orders of his superiors and kept Project Coast research documentation alive. Transnet, the state-owned transportation and infrastructure corporation that built and maintained railroads, tunnels, airports, and

hospitals, immediately employed him. Basson then went to Libya on contract to give advice on military counter-measures to CBW attacks.

In the second half of 1993, peace negotiations between the de Klerk government and Nelson Mandela and the ANC gained momentum. In August 1993, the Office of Serious Economic Offenses (OSEO) informed MI-6 and the CIA of the misdeeds of Basson and Project Coast.

The Americans and British became even more concerned when, in October 1993, Basson made his first trip to Libya on behalf of Transnet. This was the first of Basson's five visits to Libya, with his last visit in October 1995, and it is possible that he sold Project Coast secrets.

In addition, South Africa submitted a Confidence Building Measure (CBM) for 1993, as stipulated by the BWC, which provided details on the rollback of the biological side of Project Coast. In November 1993, the Americans and British objected to the South African CBM and began the process of interacting with South African officials in an effort to see that Project Coast would be rolled back to their satisfaction. According to U.S. Ambassador Princeton Lyman, the South African CBM was not forthcoming on many aspects of the CBW program, including offensive uses, weaponization, and proliferation.⁶⁶

According to Peter Goosen, proliferation expert in the Ministry of Foreign Affairs, the South Africans lacked the technical expertise to submit an acceptable CBM and sought British and American assistance. In the meantime, de Klerk and his colleagues attempted to reassure the U.S. and the U.K. that the CBW program had been rolled back.⁶⁷

In January 1994, negotiations between the de Klerk government and Nelson Mandela and the ANC finally reached settlement, and elections were scheduled for April 27. As the momentous hand-over of power approached, the U.S. and U.K. became increasingly concerned about Basson and others proliferating chemical and biological warfare secrets to other states and/or groups of concern.

On 11 April 1994, Ambassador Lyman and the British High Commissioner, Anthony Reeve, delivered a *démarche* to President de Klerk.⁶⁸ The U.S. and Britain demanded that their experts be briefed, that all CBW systems and records, including the CD-ROMs, be destroyed, that abuses of the program be investigated and reported, and that Mandela be informed. According to David Steward, de Klerk's chief of staff, the American and British ambassadors regarded Basson as a "dangerous agent."⁶⁹

Within the American team, there were differences. Ambassador Lyman was primarily concerned with reducing the proliferation threat, and State Department and CIA officials joined him in this approach. However, officials from the National Security Council (NSC) were outraged by evidence of the use of CBW and wanted to see that those responsible were punished. Department of Defense officials were late in joining the U.S. team and felt marginalized. Consequently, they sided with the NSC. Ultimately, Ambassador Lyman was able to prevail and focus on proliferation concerns, even though seeking convictions for past CBW use was part of the *demarche*.⁷⁰

According to Dr. Knobel, then South African Surgeon General, President de Klerk and the South Africans cooperated with the Americans and British.⁷¹ However, Knobel and other South African officials believed that the Americans and British were acting on the basis of questionable and uncorroborated evidence, some of which came from press reports. On 21 April 1994, South Africa responded to the *demarche* and asserted that Project Coast records were a “national asset” and that the CD-ROMs would not be destroyed. According to Knobel, he and Basson were given responsibility for briefing the U.S. and British experts and Mandela.

After the *demarche* and the inauguration of President Mandela in May 1994, American and British delegations arrived for the first of several visits to South Africa. Knobel, Basson and others extensively briefed the delegations over a three-day period and took them on a tour of Roodeplaat Research Laboratories, which had been converted to commercial production. The SADF compiled a large file on Project Coast and gave it to the Americans and British.

South Africa reassured the British and Americans that the three keys to gain access to Project Coast secrets on CD-ROM were in the hands of the President, Surgeon General, and National Intelligence Agency head. The South Africans transferred information, which they had obtained from the Russian and Iraqi programs (including flesh-eating bacteria). Knobel claimed that Basson was offered a job and money by the U.S. and Britain but declined. Three teams (from the U.N., U.S. and U.K.) investigated the January 1992 alleged CBW incident in Mozambique. In 1994 and 1995, American and British teams made more visits to South Africa to facilitate the rollback of the South African CBW program.

Basson and his trips to Libya were the main source of contention between the U.S., Britain and South Africa. In spite of the *demarche*, Basson continued to visit Libya in 1994 and 1995, until he had completed five trips. The U.S. and U.K. kept up the pressure on South Africa to control Basson and suggested that the South African National Defense Force (SANDF), which had replaced the SADF, rehire him. Opinion on the damage done by Basson varies.

According to Mangold and Adams,⁷² there is no doubt that Basson was originally invited to Libya to help them with chemical warfare facilities at Rabta. General (ret.) Meiring believed that Basson did not pass secret information on the CBW program to the Libyans or to other foreign governments. However, Meiring suggested that he gave them other information and defensive CBW techniques. There was still secrecy about how the knowledge was passed. Meiring stressed that Basson was always under instructions, and claimed there was nothing that went unnoticed by the SADF.

According to Gen. (ret.) Meiring, much of the information for Project Coast was obtained from the nationals of the U.S., U.K., and Germany. Highly technical advanced knowledge passed from U.S., U.K., and German scientists to the South Africans. The South African government did not want to cause the American and British governments embarrassment by revealing that fact. Ambassador Donald Mahley, U.S. State Department proliferation expert, and his British counterpart had led teams that examined Project Coast documents in 1994.

The range of pathogens that were developed led to the American claim that South Africa had the “second most sophisticated program next to the Soviets.” While there was no evidence that South African scientists themselves had genetically modified pathogens to create new ones, there was evidence that Project Coast had obtained the pathogens from elsewhere. In addition, from 1989-93, the South African military still had the capability to launch or deliver a nuclear or CBW payload.

On 18 August 1994, Knobel briefed President Mandela, Defense Minister Modise and his deputy, Ronnie Kasrils. The SANDF also provided a large file on Project Coast. Before April 1994 and the elections, Mandela was only getting sketchy details from de Klerk about what was developed, according to senior ANC officials.

Within the ANC, there was a debate, from 1990-94, about whether to keep the nuclear program. However, the conclusion to roll back the CBW program was unanimous. According to Dr. Ian Phillips, ANC defense expert, the ANC wanted to know where the information about the CBW program had disappeared. The ANC believes that white South African scientists and former operatives who are now living in the Middle East as well as the U.S. and Britain sold many of Project Coast's secrets to foreign sources.

In November 1994, the Office for Serious Economic Offenses (OSEO), a special unit attached to the Attorney General's department, completed an official report on the activities and financial irregularities of a network of companies that supplied the SADF with pharmaceuticals and anti-chemical warfare equipment (i.e., Project Coast). The report sent to Justice Minister Dullah Omar was marked "top secret" and the minister was reported to be studying it.⁷³ One researcher in the Attorney General's office reported studying Project Coast in early 1993.

A report in *The Sunday Tribune* in December 1994 described the network of companies working with SADF on CBW. The report named the key directors of this network under investigation as Dr. Wouter Basson, Dr. Wynand Swanepoel, and Dr. Phillip Mijburgh (a nephew of Magnus Malan), and noted that all three had served in SADF's medical service (SAMS).

The Weekly Mail and Guardian reported, from correspondence between Basson and Mijburgh, that they were researching the legal aspects of CBW. The same newspaper also reported that SADF military officials used the Council for Scientific and Industrial Research (CSIR) facilities to obtain and develop different strains of germs, some of which were highly toxic to humans.⁷⁴

In 1995, Basson's trips to Libya continued. In February 1995, an article appeared in *The Times* of London on possible South African CBW links to Libya. Evidently, someone in MI-6 tipped off the *Times*. In March 1995, the CIA and DIA informed President Clinton of Basson's activities, who authorized the sending of a delegation to South Africa, which met with Mandela. It is not certain if the delegation met with Basson or if he was in Libya.

Once again, the Americans urged the Mandela government to bring Basson under control by rehiring him. On 15 April 1995, South Africa

submitted a much-revised Confidence Building Measure (CBM). This was nearly two years after the U.S. and U.K. challenged the 1993 CBM (no CBM was submitted to the U.N. in 1994). This time U.S. and U.K. objections were addressed satisfactorily. Even so, the Americans and British continued to share concerns about the potential spread of the secrets on the CD-ROMs by Basson and others to states and/or groups of concern.

In early 1995, Generals Meiring and Knobel sat down and discussed Basson, after receiving information from NIA, CIA, and MI-6. Basson had been asked by government and SANDF officials to curb his behavior, but there was no way to do so, except to rehire him. Meiring and Knobel went to Deputy Minister of Defense Ronnie Kasrils and urged that Basson be rehired.⁷⁵ Kasrils went to Modise and Steyn and recommended the same. In May 1995, Defense Minister Modise and Secretary of Defense Pierre Steyn rehired Basson as a regular SANDF surgeon (he had been on reserve status).

Evidently, great concern existed within the South African government, the SANDF, and among foreign governments about the possibility that Basson was selling Project Coast secrets. However, even after being rehired by the SANDF, Basson still made another and final trip to Libya in October 1995.⁷⁶

In January 1997, Basson was arrested during a sting operation on charges of fraud and the possession of illegal substances based on his alleged effort to sell 1,000 Ecstasy tablets. A subsequent search of Basson's friend and business associate, Sam Bosch's home, uncovered 5 or 6 trunks and a couple of suitcases that contained secret documents related to Project Coast that were thought to have been destroyed when the CBW program was dismantled.

The senior Truth and Reconciliation Commission researcher, Dr. Villa-Vicencia, rushed to Pretoria, after Basson was arrested, in order to represent the TRC. He was joined by Mike Kennedy, the representative of the National Intelligence Agency (NIA), and representatives from the Office of Serious Economic Offenses (OSEO), and the Gauteng Attorney General's Special Investigation Team. Together they went through the contents of these trunks. After some initial squabbling, an agreement was reached that the NIA would take control and responsibility for keeping these documents secure. Before the documents were turned over to the NIA, the contents of the trunks were inventoried. These documents

contained the core of information, which formed the basis of the TRC's investigative work over the next 18 months. The TRC called in Professor Peter Folb, University of Cape Town, to serve as their scientific and technical adviser.

In March 1998, Chandre Gould, another TRC investigator who had access to the documents, and the TRC's Commissioner, Wendy Orr, looked at some of the technical documents that had been found in Basson's trunks. Gould wanted an explanation of some of the pharmaceutical and medical terminology. Orr was horrified by what she did understand, even though there was much that she did not understand in the contents. One of the first documents Dr. Orr examined was the infamous *verkope lys* (shopping or sales list).⁷⁷

The senior TRC investigator, Villa-Vicencia, concluded that the trunks contained a "mixed bag" that included memorabilia, as well as sensitive technical information, which might prove embarrassing to foreign governments, as well as information readily available in open source literature (e.g., formulas for methaqualone and how to build a bomb). He felt that collectively, these documents confirmed the idea that South Africa's biological weapons program had developed some very sophisticated processes and procedures.⁷⁸

At a hastily called meeting of representatives of various agencies at the end of May 1998, two main objections were raised to TRC hearings on Project Coast. One objection to the TRC hearings was that information disclosed during these hearings could lead to the proliferation of weapons of mass destruction that would cause South Africa to violate its international obligations. A second concern was that revelations of the involvement of various foreign governments in the CBW program could jeopardize international relations. South African government officials told the participants that Britain and the U.S. had voiced the strongest objections to the hearings.⁷⁹ Dr. Peter Folb, the TRC's scientific adviser, disagreed with the official assessment during this meeting, "because much of the science involved in Project Coast was pedestrian."⁸⁰

The compromise that was reached was to have a small group of representatives from the meeting go through every document in the TRC's possession and decide together which could be placed in the public domain at the hearing. Commissioner Orr, Dr. Folb, and TRC

investigators Gould and Jerome Chaskalson represented the TRC. Knobel, his lawyers, NIA officials, and other SANDF members, represented the government. Documents were placed into one of three categories: (1) no restrictions (i.e., ones to be referred to in the hearing and released to the media); (2) ones to be referred to but not released; and, (3) those that would not be mentioned at all.

The President's office did not accept the TRC's decision to hold the public hearings and issued an application to have section 33C invoked, which would require that the hearing be held behind closed doors. Thabo Mbeki's legal adviser and Abdul Minty, Chairperson of the Council for the Non-Proliferation of Weapons of Mass Destruction, formally presented the request for a closed hearing.⁸¹ After extensive discussions, the TRC went ahead with open hearings with the understanding that a government representative would monitor the proceedings to ensure that no proliferation or diplomatically embarrassing information was released. This agreement meant that the hearings were bogged down with legal motions and delays from the first day.

Legal wrangling delayed Basson's appearance before the TRC until the last day of the hearings. However, scientists in charge of Project Coast projects did appear and started to reveal many more details about the covert programs in their testimony in an effort to obtain TRC amnesty and immunity in future legal proceedings. The scientists began to talk to authorities about what CBW weapons and knowledge were developed, how the knowledge and weapons were used, and even some details about what was sold after the 1994 elections.⁸² Other individuals, such as Dr. Johan Koekemoer, former research manager of Delta-G, were arrested for being in possession of the designer drug Ecstasy and agreed to testify against Basson. The public also heard about the extensive misappropriation of public funds.

Disclosures from the TRC had international ramifications. In response to testimony at the TRC hearings in June 1998, the British Military Intelligence (MI5) and police reopened files on six people who had died in Britain during the 1980s and 1990s of apparent strokes or heart attacks. The re-opened investigations were initiated to explore which of these deaths might have been murders related to South Africa's secret germ warfare program. These investigations required unprecedented amounts of cooperation between South African and British intelligence services.

The deceased had all worked in Britain against the apartheid regime, or had knowledge of Pretoria's secret operation in the 1980s to acquire and develop chemical and biological weapons, at the time of their death in Great Britain.⁸³

Despite the limited knowledge obtained from Basson at the TRC, these hearings played a critical role in opening up secret government activities. The TRC hearings on Project Coast opened "a window on the house of horrors" to public scrutiny and let the public know much more about what went on during the apartheid era. These disclosures, in turn, helped to stimulate a national dialogue that was designed to allow the nation to start to heal.⁸⁴ The disclosures also established an important precedent and ensured that South Africa's most important post-1994 trial involving national security issues would be open rather than closed to the public.

The Basson trial has been one of the longest and most complicated trials in South African legal history. Basson was initially charged with multiple counts of fraud, murder, conspiracy to murder and possession of drugs (Ecstasy, Mandrax and cocaine). However, the trial was quickly halted by objections presented by his lawyers. In hindsight, the most important objection raised by the defense related to conspiracy to murder charges against Basson for the poisoning of 200 SWAPO prisoners of war in a Namibian detention camp and his alleged involvement in the murder of five other SWAPO members in Namibia.

The Basson trial suggests that effective measures designed to limit the proliferation of CBW or illegal drugs in the future will require much greater inter-agency cooperation within nation-states and new forms of international cooperation among agencies in several countries. The South African case suggests the need for greater coordination between defense and counterproliferation agencies and agencies whose primary mission are crime solving and prevention.

The Basson trial is also useful for illustrating the complex ways that CBW project managers may be able to exploit transnational financial flows and international corporate instruments to quickly move, launder, and house large sums of money for either political or personal motives.

The Basson trial may also serve as a useful reminder of what may become a more general trend: the initiation or continuation of covert CBW programs primarily as a means to cover illegal personal gains from the sale of weapons (including CBW) and drugs.

Conclusion

In April 2002, the Basson trial came to an end after more than 300 days of actual trial and after almost 200 state witnesses gave evidence and after some 30 000 pages of transcripts had been produced. With many of Basson's former SADF superiors, including Magnus Malan and Dr. Knobel present in the courtroom, Judge Hartzenberg acquitted Basson of all charges. A charge of being in possession of thousands of ecstasy tablets was dismissed when the judge accepted Basson's version of events above that of a drug dealer witness.

The judge accepted Basson's testimony that he had ordered that all Project Coast documents destroyed in 1993. The judge accepted Basson's evidence that he had not packed the trunks and could not be found guilty of possession of cocaine, ecstasy and mandrax, as he was not aware of what was in the trunks. Finally, he rejected the evidence of the forensic auditor that Basson was the beneficial owner of SADF front companies, which stood at the center of the fraud charges. Protests against the acquittal came from Archbishop Desmond Tutu, the Chair of the Truth and Reconciliation, and from many other prominent South Africans, who were appalled that Judge Hartzenberg had sided with "Dr. Death." Immediately, the government sought to appeal the case and then retry Basson.

In January 2003, the Swiss added a request that Basson and former police chief of forensics Lothar Neethling be interrogated in the presence of Swiss officials about arms and nuclear goods trafficking. The Swiss government also wanted other records relating to Project Coast. In the wake of the trial, Namibian officials openly considered applying to extradite Basson to stand trial for the death of more than 200 SWAPO prisoners of war. However, Basson remains covered by a blanket amnesty extended to all SADF personnel who had committed crimes in Namibia while exercising their duties.

On June 3, 2003, the Supreme Court of Appeal in Bloemfontein denied the state's appeal for a retrial of the Basson case. The appeal judges found that Judge Hartzenberg's refusal to remove himself did not relate to an error of law on his part, but that it was a factual finding. Basson had finally escaped punishment for his alleged misdeeds.

In March 2003, South Africa sent a delegation of WMD experts to Iraq supposedly to assist in the disarmament process. The experts

included Col. Ben Steyn, adviser to South Africa's surgeon general and an expert on nuclear and chemical weapons and scientist Philip Coleman of Protechnik (the CBW defense firm). Not invited to go to Iraq were Project Coast Wouter Basson, Daan Goosens, or other top Project Coast scientists.

In April 2003, revelations emerged about the attempted sale to American officials of biological pathogens and Project Coast documents by retired General Tai Minaar on behalf of Daan Goosens in May 2002. The story raised new concerns that Project Coast had not been rolled back and that the scientists remain a source of possible proliferation.

During the period when it developed chemical, biological, and nuclear weapons, South Africa was an isolated state that felt threatened by a more powerful state actor, the Soviet Union, which was helping hostile regimes and movements in neighboring states. One response of the apartheid regime to changing threat perceptions in the region was to develop Project Coast.

The decision-making process was secretive and controlled by the military and enabled a nuclear weapons program and a very sophisticated CBW program to be developed with little outside scrutiny. Military and police units used chemical and biological agents for counter-insurgency warfare, assassination, and execution of war prisoners.

As the regime felt increasingly threatened by opposition at home, top political leaders approved plans for research and development of exotic means to neutralize opponents, large-scale offensive uses of the program, and weaponization. However, the plans were not operationalized. The end of the external threat led to a decision to unilaterally dismantle the CBW program prior to a shift to majority rule.

Lack of civilian control over military programs made the rollback difficult, rife with corruption and may have permitted the transfer of findings and materials to other states.

The U.S., U.K. and other countries pressured the South African government to ensure that the CBW program was dismantled and the former project manager, Dr. Wouter Basson, constrained. Since Basson secretly retained copies of Project Coast documents, concerns remain about whether he assisted other states by transferring and selling such information.

The information that has emerged to date about Project Coast suggests that a country possessing chemical and biological weapons is likely to use them against adversaries at home and abroad. The

unpredictable, hot and windy environment of southern Africa did not discourage conventional military or counter-insurgency units from experimenting with these weapons.

The South African case also dramatically shows how thin the line is between defensive and offensive weapons. First the Iraqi, and now the South African, cases suggest that it is prudent to assume that if a country is suspected of developing covert nuclear capabilities, it is probably supporting research into the offensive uses of chemical and biological weapons as well. If efforts are being made in the more challenging and expensive nuclear arena, why would a regime not develop the more accessible and less costly chemical and biological weapons?

South African CBW programs also underscore the importance of control by civilians, of transparency, and of accountability. Some aspects of the apartheid regime's management of their CBW programs may be unique. However, this case vividly illustrates what will happen when there is loose accountability of covert NBC research and development by senior military and political leaders. This is especially likely when the government is besieged both at home and on its borders.

The efforts to dismantle the South African CBW program illustrate how difficult effective NBC non-proliferation agreements will be to enforce. For many, the discovery that Wouter Basson secretly kept some of the classified documents is deeply disturbing to those who believe that South Africa developed highly sophisticated CBW capabilities during the Project Coast years.

For others, the science involved in the 10 years of research conducted by Project Coast was considered so pedestrian that they are not worried about the possibility of proliferation. These differing views of the program deserve further research and evaluation by CBW experts.

The likelihood that the South African government still possesses highly sophisticated CBW secrets, which it considers a "national asset," will remain a source of concern for the foreseeable future. As controls on arms sales erode and as high-level corruption increases, the chances that top officials might sell these secrets to states and/or groups of concern increases. The issue for counterproliferation experts is how to prevent such a transfer of deadly information from occurring.

Notes

1. Edward Regis, *The Biology of Doom: The History of America's Secret Germ Warfare Project* (New York: Henry Holt, 1999). Albert J. Mauroni, *America's Struggle with Chemical-Biological Warfare* (Westport, Conn.: Praeger, 2000). Erhard Geissler, et. al., eds., *Biological and Toxin Weapons: Research, Development and Use from the Middle Ages to 1945* (New York: Oxford University Press, 1999). Ken Alibek, with Stephen Handelman (Contributor) *Biohazard*. (New York: Random House, 1999). Tom Mangold and Jeff Goldberg, *Plague Wars: A True Story of Biological Warfare* (New York: St. Martin's Press, 1999). John Prados, "All Weapons Great and Small," *Washington Post, Book World*, 16 January 2000, 7.
2. Interview with Dr. Vernon Joynt of Mechem (explosives warfare program) and the Council for Scientific and Industrial Research (CSIR), Pretoria, South Africa, 14 June 2000.
3. Interview with General (retired) Jannie Geldenhuys, Pretoria, South Africa, 13 June 2000.
4. H.E. Purkitt, "The Politics of Denuclearization: The Case of South Africa". Presentation at the Defense Nuclear Agency's Fourth Annual International Conference on Controlling Arms, Philadelphia, Penn., 21 June 1995. (Earlier draft presented at Institute for National Studies (INSS), U.S. Air Force Academy, Colorado, 9 November 1994.
5. Interview with Gen. (ret.) Georg Meiring, Pretoria, 3 July 2000.
6. Interview with former Defense Minister Magnus Malan, Pretoria, 23 June 2000.
7. Annette Seegers, *The Military in the Making of Modern South Africa*. (New York: St. Martin's Press, 1996).
8. Interview with Magnus Malan, 23 June 2000.
9. Interview with Dr. Vernon Joynt, Pretoria, 14 June 2000. Dr. Joynt claims that Surgeon General Nieuwoudt sent Major Wouter Basson to him in 1978 and offered him the directorship of a chemical weapons program. While Joynt refused, many scientists and specialists accepted research projects by Nieuwoudt and Basson, and many did not tell their superiors.
10. Interview with Magnus Malan, 23 June 2000.
11. See Lt. Gen. (Dr.) D.P. (Niels) Knobel's testimony to the Truth and Reconciliation Commission (TRC), July 1998.
12. Chris Oppermann, "How the taxpayer footed the bill for Project Coast," *Weekly Mail and Guardian* archive, 27 June 1997.

13. According to Helmut Heitmann, defense expert, in a 26 June 2000 interview, the evidence was not conclusive.

Heitmann was among the first journalists to raise questions about South African allegations that the Cubans had used chemical weapons in Angola and highlighted the difficulty of verifying the source of alleged CBW attacks (Heitmann, 1985, 1990; see also Steenkamp, 1989).

14. Interview with Magnus Malan, 23 June 2000. Despite concerns by senior military leaders about the possibility that Cubans might use CBW in Angola, little time was spent on defensive CBW training during the 1970s. From the mid-1970s through the late 1970s only a few hours during one day of training was devoted to CBW of SADF infantry personnel. Most of these sessions focused on the use of CS gas. Many more hours of training were devoted to how to counter urban violence. Interview with Mark Malan, former SADF officer and senior researcher at the Institute for Strategic Studies-South Africa, 23 June 2000.

15. According to Chandre Gould, formerly of the TRC, interviewed 29 June 2000 in Johannesburg, South Africa.

16. Mangold, *Plague Wars*, 236. They estimate four to five million pounds.

17. Interview with Dr. Ian Phillips, 13 June 2000.

18. Interview with Rocky Williams, ISS-South Africa, 5 July 2000.

19. Interview with Gen. (ret.) Meiring, 3 July 2000.

20. Mangold, *Plague Wars*, 243.

21. Mangold, *Plague Wars*, 241.

22. Mangold, *Plague Wars*, 243.

23. Interview conducted in 1997 by Helen Purkitt.

24. Magnus Malan indicated as much in a 23 June 2000 interview.

25. According to Dr. Rocklyn Williams of ISS, Pretoria, interviewed 15 July 2000, he debriefed a SADF sergeant in 1983 who talked about the development of a "black bomb."

26. Mangold, *Plague Wars*, 244.

27. Mangold, *Plague Wars*, 244. In an interview for the television documentary, Dr.

Daan Goosen again acknowledged that the target of Project Coast's work on drugs that would induce infertility was the black population. One line of research was to develop a vaccine, one for males and one for females that could be given surreptitiously or under another pretext. This research was based on open source contraceptive research. Another line of research was work on a [unnamed] product that could have been given without the knowledge of the person receiving it either orally or in some sort of injection. He went on to state, "the most serious problem as told to us [was] the birth rate of the black population, and that it would outgrow the resources of the country and it was very important that this be brought under control. There was no doubt about that. This was given to us by Basson, by the surgeon general...it was very clear that this was the most important project we had to work on." *Frontline transcripts from Plague Wars: A report on biological weapons threats and how the Soviet Union secretly amassed an arsenal of bio-weapons*. Transcript from television show <http://www.pbs.org/wgbh/pages/frontline/shows/plague/sa/>. (Accessed 15 June 2000)

28. Interviews with a South African journalist, 20 July 2000.

29. According to Chandre Gould, formerly of the TRC, in a presentation, 29 June 2000.

30. Interviews with retired generals Thirion and Geldenhuys, Pretoria, 13 June 2000.

31. Testimony by Dr. Mike Odendaal in the Basson Trial, 24 May 2000. See "HIV Blood Sample Frozen for Chemical Warfare, Basson Trial Hears," *South African Press Association (SAPA)*, 24 May 2000.

32. Mangold, *Plague Wars*, 243.

33. Mangold, *Plague Wars*, 242.

34. Dr. Basson told Mangold (*Plague Wars*, 442, note 443) in 1998 that the reason why a detailed investigation by Britain's MI-6, the Security Service, failed to substantiate the allegations that he visited Porton Down is because he used false names and passports for his frequent visits. Another possibility is that Basson met with former Porton Down employees. Several former employees of Porton Down report that they were asked to pose as employees after reporting contacts with Wouter Basson to British authorities. See Michael Evans, "South Africa may have ordered British deaths," *The Times (London)*, (14 July 1998), 7 for further details.

35. Testimony by Dr. Odendaal, 24 May 2000. See "HIV...," *SAPA*, 24 May 2000.

36. Interview with former South African military officer, who will remain anonymous, July 2000.

37. Ambassador Princeton Lyman, e-mail to Stephen Burgess, 18 September 2000. Ambassador Princeton Lyman backtracked somewhat from earlier statements made in a

31 August 2000 interview about claims that weaponization took place. Donald Mahley of the U.S. State Department, who was part of the delegation to South Africa after the *demarche* of 11 April 1994, also downplayed evidence of weaponization in a 30 August 2000 interview.

38. Mangold, *Plague Wars*, 242. Skepticism still surrounds Basson and Knobel's claims about Basson's international activities. According to several interviewees, it is doubtful if Basson ever penetrated Porton Down or U.S. and Soviet facilities.

39. According to Gen. (ret.) Sass, interviewed 12 June 2000 in Pretoria.

40. According to Gen. (ret.) Sass, interviewed 12 June 2000 in Pretoria.

41. Interview with Dr. G. Scharf, former Director of Medical Hospital One (Pretoria), 6 July 2000.

42. Arthur Allen, "Mad Scientist," *Salon.com* (<http://salonmag.com/health/feature/2000/06/26/biofem>), 26 June 2000 (accessed August 9, 2000)

43. See Andrew Bluth and Tony Saavedra "The materials are collected at the home of Jerry Nilsson, who was questioned and released, *The Orange County Register*, April 2, 2000 and Tony Saavedra "Surgeon says he doesn't know why he was subjected to a search," *The Orange County Register*, April 5, 2000

44. Interview with South African prosecutor in the Basson case, July 2000.

45. Interview with former TRC investigator, 20 July 2000. In addition to scientific literature, papers from scientific conferences, and government documents marked top secret, investigators found financial records, canceled checks, bags of foreign coins, memorabilia (e.g., a cartoon of Basson carrying a violin case), and several small bottles of scotch and beer cans, which they did not taste. The contents in these trunks were really a "mixed bag" of personal effects and top secret documents.

46. Mangold, *Plague Wars*, 277-8.

47. Dr. Daan Goosen, former managing director of RRL, claimed that Project Coast never conducted research on HIV as a weapon. However, he acknowledged that Project Coast scientists were planning to do some work that he termed "legitimate work" for a European pharmaceutical company. Interview Transcript from television show <http://www.pbs.org/wgbh/pages/frontline/shows/plague/sa/> (accessed 15 June 2000).

48. Interview with South African reporters who covered the TRC hearings, July 2000. Despite the lack of evidence linking Project Coast research with the intentional use of AIDS, allegations that the policies of the former South African government were motivated by AIDS considerations are likely to be raised in the future, as the HIV

epidemic peaks in South Africa. For example, one researcher at the International AIDS conference held in Durban in July 2000 suggested in a paper that projections of huge losses in the black population through AIDS was the real reason why de Klerk had started transition process.

49. As Daan Goosen noted, “biological weapons was a new field, and it was done all over by all countries, even England at Porton Down and the Americans at Fort Detrick. We know they were doing it, and we had contacts with all that work and the weapons that were developed.” *Frontline transcripts from Plague Wars: A report on biological weapons threats and how the Soviet Union secretly amassed an arsenal of bio-weapons*. <http://www.pbs.org/wgbh/pages/frontline/shows/plague/sa/>. (Accessed 15 June 2000).

50. Interview with Jacques Pauw, Johannesburg, 29 June 2000. Pauw had interviewed the Project Coast scientists, including Andre Immelman, Schalk van Rensburg, Mike Odendaal, Daan Goosen, and Peter Lourens.

51. Interview with Col. (ret.) Johann Smith, 30 June 2000. Negotiations with Mandela and the end of the Angolan war led Basson and others to take advantage of a window of opportunity to get rich. He was able to deceive top generals and salted away millions. Smith was certain that Basson turned to dealing Ecstasy and other drugs, because his money was in Swiss banks, and he still needed to raise cash in South Africa.

52. Interview with Brig. Gen (ret.) Bill Sass, July 1994. See Purkitt, “The politics of denuclearization,” for further details of changes made at the end of P.W. Botha’s rule.

53. Interview with David Steward, 26 June 2000.

54. According to Dr. Renfrew Christie, interviewed 26 Jun 2000, the U.S., backed by Israel and the U.K., issued a “hostile nation warning” to South Africa in January 1990 to destroy the nuclear weapons program in order to keep it out of ANC hands. Christie claimed that, in the 1980s, Israel had been involved in South African NBC programs, and the U.S. and Britain did not object to South Africa developing those programs.

55. Interview with Prof. Buys, 14 June 2000.

56. According to Col. Mike Ferguson, former Defense Attaché to South Africa, interviewed 23 May 2000 in Washington D.C.

57. According to Col. Mike Ferguson, interviewed 23 May 2000.

58. Testimony of RRL scientist, Schalk Van Rensburg, to the TRC on 9 June 1998.

59. Bumbled assassination attempts using BW devices seem to have been pretty

common. This fits with what BW terrorist experts have found in other cases. See Carus, *Working Paper on Bioterrorism*, 88.

Carus classifies this incident as probable or possible use but with no authoritative confirmation. In some cases, a biological agent was used, but there was no information to indicate whether the perpetrator knowingly caused the infection. The probability of intentional contamination for these cases is difficult to determine. See Carus, 90.

60. Jacques Pauw, *Into the Heart of Darkness: Confessions of Apartheid's Assassins* (Johannesburg: Jonathan Ball, 1997).

61. Pauw, *Into the Heart of Darkness*, 226.

62. Interview with David Steward, 26 June 2000.

63. According to General (ret.) Meiring, interviewed 3 July 2000. Basson's soft retirement meant that he was no longer an active member of the SADF but continued to draw a paycheck as a reserve SADF officer and doctor at a military hospital.

64. According to General (ret.) Meiring, interviewed 3 July 2000.

65. See Knobel's testimony to the Truth and Reconciliation Commission, July 1998.

66. Interviews with Ambassador Princeton Lyman, Washington, D.C., 25 May and 31 August 2000.

67. Interview with Peter Goosen, proliferation expert, Ministry of Foreign Affairs, Pretoria, 15 June 2000

68. According to Dr. Ian Phillips, ANC defense expert, interviewed 13 June 2000, Anglo-American cooperation on South Africa's NBC program was not as smooth as it may have seemed. During the 1989-94 period, the British were upset with the Americans at the latter's efforts to promote their own "solution for South Africa."

69. Interview with David Steward, 26 June 2000.

70. Interview with Ambassador Lyman, 31 August 2000.

71. Interview with Dr. Knobel, 15 June 2000.

72. Mangold, *Plague Wars*, 243.

73. *Weekly Mail and Guardian*, 15 December 1994.

74. Koch and Fleming, *Weekly Mail and Guardian*, 15 December 1994.

75. General (ret.) Meiring, interviewed 3 July 2000.

76. Although Basson's trips to Libya did decline after he was "rehired," the South African government at one point placed Basson under an undeclared "house arrest."

77. The "*verkope lys*" was a list of items, allegedly ordered by Dr. Basson and given to CCB operatives. This list includes anthrax-infected cigarettes; shampoo poisoned with an insecticide; and poisoned chocolates. Wendy Orr, *From Biko to Basson* (Saxonwold, South Africa: Contra Press, 2000): 328-9. See Appendix C for the complete list.

78. Interview with Dr. Villa-Vicencia, former senior investigator for the TRC, 21 July 2000.

79. For additional details of this meeting that included representatives of the old and new military and political guard, see Orr, 331-2. Dr. Orr notes that she arrived at this hastily called meeting and found that she was the only TRC (and only woman) representative among the 40 participants.

80. Orr, *From Biko to Basson*, 332. She notes that Dr. Folb made himself forever unpopular with many participants at the meeting by making this observation.

81. Chandre Gould confirmed the agreement regarding the status of documents in a telephone interview in July 2000.

82. For example, Dr. Jan Lourens, a bio engineer who worked at Delta G and later headed Protechnek, was one of the scientists who applied for amnesty to the TRC after Basson's arrest. He called the claims "nonsense" that Project Coast was a defensive program.

83. Michael Evans, "South Africa may have ordered British deaths," *The Times* (14 July 1998), 7.

84. Paraphrase of comments made by Dr. Villa-Vicencia, former senior investigator for TRC during an interview in July 2000.