

RED MERCURY: Hoax or the Ultimate Terrorist Weapon?

By Edward V. Badolato and Dale Andrade

It began with a gruesome discovery in November 1991. Two boys with nothing better to do found an unlocked BMW parked on an out-of-the-way street in Johannesburg, South Africa. They hot-wired the car and drove it to Soweto, where they took out the sound system. Then they opened the trunk. Inside was a human torso covered with black paint, the arms and legs surgically severed. There was very little blood.

The victim turned out to be Alan Kidger, sales manager for Thor Chemicals, a British multinational corporation. Several theories sprang up to explain the murder. He had recently moved into an Afrikaner neighborhood with his Brazilian-born wife who might have been mistaken for a "colored." Was the black paint a racist message? Thor Chemicals also employed many Zulus, and the killing might be part of an old warrior custom. Cut off the legs of your enemy and he cannot chase you through the afterlife. But it was the last theory that was the most interesting: according to some South African police officials, Alan Kidger might have been killed by the Israeli Mossad because he was involved in supplying high-tech chemicals to Middle Eastern countries, particularly a mysterious substance known as red mercury. Israel denied any involvement.

Reports of red mercury first surfaced after the dissolution of the Soviet Union, when former communist officials and scientists, hurting for money, began selling weapons grade nuclear material on the world market. According to experts, red mercury can simplify the building of a nuclear weapon, an attractive idea for terrorists. Although it is not an explosive, red mercury serves as a high-energy catalyst capable of triggering nuclear fusion. One report suggests that red mercury was first successfully developed in 1965 at a Soviet research center at Dubna, near Moscow, the outgrowth of earlier efforts to produce fusion using high-explosive implosion technology. Soviet scientists mentioned this research publicly in 1958, then a dark veil of secrecy came down.

A Mysterious Substance

Press reports centered on the mystery surrounding red mercury, making it clear that no one knew much about it. One of the few detailed articles appeared in the June 1994 issue of *International Defense Review*, which featured an interview with a Russian nuclear chemist. His explanation was less than enlightening: "Red mercury is principally based on mercury antimony oxide.... This chemical compound, a reddish dark brown or purple powder, is produced in relatively large quantities at a

chemical factory in Ekaterinburg (Sverdlovsk); it is not available from chemical suppliers in the West. The mercury antimony oxide produced in Russia is used mainly, if not exclusively, for the production of red mercury."

None of which sheds any light on the supposedly deadly characteristics of red mercury. And on that there is little agreement. In fact, only a few scientists believe red mercury really exists. One of them is Sam Cohen, an American nuclear physicist who helped design the neutron bomb. He says "red mercury is real and it is terrifying. I think it is part of a terrorist weapon that potentially spells the end of organized society."

Strong words, but Cohen points to Russian reports from 1993 that claim the military developed a low-yield nuclear weapon "in which a doubling of yield is achieved with a hundredfold reduction of weight compared to existing weapons." In other words, according to Cohen, the Russians must possess a new technology because such small tactical weapons cannot be produced using fissile material like plutonium or highly enriched uranium. Is red mercury the answer? Cohen believes so, and claims that the substance could be used to make a baseball-sized bomb capable of killing everyone within 600 yards of the explosion.

Another believer is Dr. Frank Barnaby, a former scientist at Britain's nuclear weapons laboratory. "I'm pretty well convinced it exists," he told an interviewer in 1994. "It's an enormous conspiracy, if all the people I have spoken to are lying." Barnaby was skeptical until taking a trip to Russia in 1994, though he concedes there is a strong chance that many of the claims are false. Still, he noted, "even if 95 reports out of 100 are fraudulent, there is a residue that is not."

The Russian Connection

If any of this is true, red mercury holds infinite possibilities for terrorists. For decades, the specter of apocalyptic terrorism has lurked in the background, and experts have warned that someday some terrorist group would use weapons of mass destruction to wreak large-scale death and mayhem. Witness the most recent terrorist mega-events: the World Trade Center bombing, The Oklahoma City bombing, and the Tokyo subway gas poison attack. All serve stark notice to the world's counterterrorism community that is a potential for future terrorists to seek larger and more destructive weapons from the nuclear, chemical, and biological arsenals. But these weapons are closely guarded and well-protected.

At least that was true until the break-up of the Soviet Union. Its demise ushered in the rise of Russian organized crime and the smuggling of nuclear material, and it was only natural that something like red mercury would become a hot commodity in the international illicit arms trade. In fact, during the early 1990s, red mercury was so much in demand--and so little understood--that there were several creative scams pulled off by unscrupulous Eastern European agents against unwitting buyers.

The Russians have been relatively quiet about reports of illicit shipments of red mercury allegedly being smuggled out of their country. Some say that the Russians don't want to admit that their nuclear security is ineffective. Others say that there are Russian mafia leaders close to President Boris Yeltsin, and they are getting official cover for their red mercury dealings.

According to defense writers with Jane's publications in London, red mercury is much more than that. Produced in several military centers, including some in Khazakhstan, Russia manufactures about 60 kg a year, they say. Much of that is then placed on the black market by the Russian mafia, where it sells for about \$300,000 a kilogram. Customers allegedly include Israel, Iran, Iraq, Libya, and Pakistan, and some of them may be employing Russian scientists to assist in making low-yield nuclear weapons.

From Russia come official denials, but they are often luke-warm. On the surface, the government maintains that red mercury is a scam orchestrated, according to one source, by "individuals close to the government and with the full backing of the security services." At the bottom of it all, goes this line of reasoning, is an elaborate fraud to raise much-needed hard currency.

Russian officials concede that their country's wealth of natural resources has attracted swindlers and con men of all stripes. They are better organized than ever, running sophisticated production and export networks and corrupting employees in state enterprises such as mines, shipyards, and refineries. But Major General Vyacheslav Saltaganov, head of the Interior Ministry's economic crimes division, concludes that red mercury is only a get-rich scheme, saying that "our swindlers have managed to create a demand for it abroad."

Maybe so, but preventing the smuggling of nuclear material is a top for US nonproliferation and counterterrorism officials, and the US Department of Energy has recently offered to assist the Russians with the latest physical security equipment to prevent theft from its nuclear plants. Clearly, if the red mercury stories are real, then its theft and smuggling outside of Russia presents a significant increase in the worldwide terrorism threat.

The South African Connection

South Africa enters the red mercury scene because of its former covert nuclear weapons program, and the ease with which various types of illegal weapons and material can be moved in and around southern Africa. South African police consider the security of their border to be a major problem. Narcotics, drugs, counterfeit money, illegal arms and ammunition, elephant tusks, rhino horn, and stolen vehicles are among South Africa's worst cross-border dilemmas, according to South Africa's National Crime Investigation Services.

The use of aircraft to smuggle illegal shipments is a daily occurrence all over Southern Africa, and the Russians are in the thick of this situation--both in providing transport aircraft, and in the penetration of this area by the Russian mafia gangs. For example, in an episode that took place over the last few weeks, South African arms dealer Ters Ehlers, former private secretary to Prime Minister P.W. Botha, was implicated in unauthorized Namibia-to-Angola flights carrying illegal arms. Namibian Deputy Minister of Transport Klaus Dierks ordered a Russian An-12 transport plane grounded that was allegedly used to fly illegal supplies to Angola's UNITA guerrillas. Ehlers has also been implicated in 1994 arms shipments to Rwanda's Hutu army which violated the UN arms embargo. There are four Russian An-12 transports for hire that are based at Lanseria airport near Johannesburg that are reportedly used for "special cargo missions." Lanseria Airport is considered to be one of Southern Africa's busiest, and it is reportedly used frequently for smuggling operations.

There are also unconfirmed reports that the South African nuclear weapons program has developed, in addition to its admitted seven nuclear bombs, a nuclear artillery shell for the G5 howitzer, and that red mercury played a role in the reduced-size nuclear charge designs. Additionally, it is well-known in South Africa that there are several Middle Eastern countries that are interested in purchasing these latest arms from dealers and arms companies, such as ARMSCOR, the manufacturer of the G5. Iranian arms shoppers are frequent visitors to South Africa, and some observers suspect that speculate that Hizballah has sent shoppers to visit with some private arms dealers.

All this has been made even more sinister by four murders connected to red mercury. In 1991 there was the bizarre murder of Alan Kidger. Then in April 1993, Wynand van Wyk, one of South Africa's top chemical engineers was bludgeoned to death in a Cape Town hotel, where he had been lured to a business meeting. He was believed to be providing Arab governments with chemicals to be used for military purposes. He had also had various business dealings with Kidger.

In July 1994, Dirk Stoffberg, an international arms trader, and his wife were found shot in their home in South Africa in what was termed a "murder suicide," but with suspicious evidence to the contrary. Stoffberg had been heavily involved in the Iran-Contra affair--and he had been allegedly involved with red mercury.

Another big-time South African arms dealer, Don Lange, was found dead in June 1994 with his head in a plastic bag connected to a cyanide gas bottle. Officially ruled a suicide, there were strong indications that it could have been murder, a theory bolstered when South African officials quietly ordered a second autopsy on the body. Lange was involved with Kidger and had been heard talking about red mercury. Lange was also close to Gerald Bull, who had helped the South Africans develop their 155mm G5 Howitzer, one of the best artillery guns in the world. Bull

was assassinated in Europe after his involvement in helping the Iraqis build their long range "Super Gun."

Police investigations and local reporters indicate that the four South African murders were linked by the victim's arms deals, nuclear and chemical weapons development expertise, Middle East contacts, and, coincidentally, interest in red mercury.

There are several reasons why South Africa is an area of focus for those interested in red mercury. First, South Africa's police services are in a transition period and its crime fighting resources are stressed to the limit, allowing criminals to flock in to take advantage of illegal opportunities.

Second, similar to Russia, it is experiencing a "brain drain" of trained personnel from its nuclear weapons community as South Africa's Atomic Energy Corporation (AEC) budget has been severely cut from one billion Rand to 245 million Rand. The AEC says it is losing large numbers of nuclear scientists and engineers to foreign countries, with over 100 nuclear scientists and at least 500 nuclear engineers having departed over the past five years for greener pastures--possibly in technically advising on nuclear matters, such as Red Mercury.

Third, under South Africa's previous government there existed sophisticated international arms trading network, much of which remains intact among front companies and private individuals who know how to move special shipments and payments across national borders.

Fourth is the unofficial espionage network that has been a way of life, and old habits die hard for out-of-work intelligence agents. Recently, the Commissioner of the South African Police Services and other senior police officials discovered that someone was bugging their offices and phones. Meanwhile, South Africa's National Intelligence Agency was accused of spying on the Land Affairs Minister by placing a tracking device in the minister's official vehicle, for which the NIA denied responsibility. This is the type of situation that breeds intrigue and conspiracies--conducive to spreading the red mercury story.

Hoax or Threat?

Is there any validity to the red mercury stories? The bottom line should be technical analysis, but even that is difficult to come by. Alleged samples of red mercury have been sent to the US Department of Energy's nuclear labs on various occasions, but so far, according to lab sources, the red mercury tests have all turned out to be fake. One similar chemical that may be adding to the confusion is fulminate of mercury which bears a resemblance to the red mercury descriptions of an ocher-colored substance. But fulminate of mercury has no nuclear applications and is not radioactive. It is a poisonous substance that is frequently used in small

explosives such as shotgun cartridges, and it was known to be used years ago in rocket propulsion systems.

The bottom line is that there is no official confirmation of the existence of red mercury. In Great Britain the standard denial is that "there is no evidence that red mercury exists." The US Department of Energy says that "the alleged samples it has been asked to test were worthless" and that "it doubts if red mercury really exists." Vic Hogsett, an analyst at the Los Alamos nuclear research facility, said "this is the unicorn of science. You can put your hand on a Kalashnikov, you can touch plutonium. With red mercury, there just doesn't seem to be anything there. Call it red mercury, call it a Big Mac. I call it a scam."

On the other hand, the prestigious International Defense Review in 1994 chastised Western governments for dismissing red mercury without more detailed tests. The outright denials, the article argued, raise the possibility that "red mercury is already taken seriously by many governments and that public pronouncements of the substance as a hoax serve merely to divert attention."

Whatever the case, the terrorism angle is impossible to ignore. If red mercury exists in some form and does even a fraction of what some experts say it can, then it would be a very attractive package for any group interested in expanding into the field of nuclear terrorism. What is needed is a detailed investigation and explanation of the actual level of the threat so that the issue of red mercury can either be put to rest or the counterterrorism priority it deserves.

Edward V. Badolato is president of USAfricon, Inc., a Washington-based security management firm with offices in Johannesburg and Jakarta.

Dale Andrade is editor of the Counterterrorism and Security Journal.