

Dear Dave and Sol,

3/4/91

Either Brooklyn's postmen have ESP or they are as of old, very old, when they were every good at delivering incorrectly addressed mail. At 2¢ a letter, 1¢ a post card.

For Dave's records, because he'll have more to forward, and it is amazing that an envelope addressed to Sol Rifkin, 15 Henry Street, was delivered, it is Sol Rabkin, and 75 Henry Street.

I now do not remember whether I included a few words about one of the co-authors of that lengthy article it would have been too difficult to xerox on our machine, so I say a few words about William (who calls himself) Scott Malone. I do not recall that Dave met him when several of us spoke at College Park. He was then 6'6" and not out of George Washington Univ. He was a friend of the other students I'm sure Dave does remember. He was very important to me the most painful day of my life. And what a reminder of the terrible medicine malpractised on me by the oldest of the HMO's, Group Health Assn, of which we were among the earliest members.

The week before I'd taken Greyhound to DC because Senator Schweiker had asked me to consult with him and his assistant Dave Marsden when Schweiker headed the Church Committee's JFK assassination subcommittee. My left leg was giving me pain and I'd made an appointment for the end of the ~~morning~~ morning at GHA. Enough pain so I was on crutches. Only no cabbie risked stopping for a fare at the bus station in D.C. It took me 3rd-40 minutes of agonizing standing, on the crutches, before one did stop. I spent the painful morning in a painfully unsuccessful effort to talk Schweiker out of the four nutty theories he liked. I did debunk them all but he liked them anyway. When he ^{st^w} was the pain I was in he phoned GHA and told the doctor I'd be late and why and ~~they~~ he had Marsden drive me there. The doctor gave me what he described as a sure-fire ^{and} very painful test for thrombophlebitis and said that was not my problem. He gave me a nitrofurantoin which was of no value, and said if the pain did not go away in a week to return. But when he got to thinking about he he called me before the week was up, told me to return, and that happened to coincide with Bella Abzug's desire for me to help her prepare for hearings on compliance with FOIA and the Archives in particular. Her legislative assistant, to be able to talk to me, came out and we talked as he drove me to GHA. It did prepare for a decent hearing. GHA's Dr. Raymond Turner examined me again and said I did have thrombophlebitis and to go over to the GW hospital, a little more than half a long city block to the admissions desk. I asked him how then - couldn't walk. He said to take a cab. On the way to the elevator I passed a public phone, called Jim Lesar to report my destination and situation and to tell -il, and I with great difficulty made my way to the front entrance, to take a cab for less than a block! And again could not get one to stop. I finally had to sit on the pointy concrete low decorative fence or something like it and continue to signal the cabs that would not stop. After quite some time this giant of a young man came up to me and asked my name. He'd phoned Jim Lesar to ask if he could help in any way and Jim sent him to rescue me. He asked how he could help and I told him to go inside the GHA building and steal a wheelchair. He did, and that is how I got to the hospital.

Later he would come up and visit with us~~y~~ and go over my materials. Once he stayed about three weeks. When he was out of college and moving from home we gave him some furniture we didn't need. After that - lost track of him except that he'd come up from time to time with some daring adventure to report. Once was bugging some mafia guys with a thin machine in his pocket. He had a clear tape but it was of no real meaning. Then he started getting odd jobs of more or less investigating and again I lost track until suddenly there he was with an Emmy for his investigative reporting. I'm glad to have seen the credit saying he is an investigative reporter for PBS now.

Best,

Harold

OUTLOOK

Commentary and Opinion

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The Guns of Saddam

Part 2/10/91
America Shrugged While Gerald Bull Designed the Ultimate Cannon and Sold It to Iraq

By William Scott Malone, David Holey and Sam Hemingway

GERALD V. BULL spent his life perfecting the most deadly, if unglamorous, weapon of modern warfare—artillery. When ground combat begins in the Persian Gulf war, long-range 155mm howitzers designed by Bull and based on research he carried out under Pentagon contract may pose the greatest threat to the opposing force. Unfortunately, the Bull cannons are being aimed by Iraq at U.S. and allied ground troops in Saudi Arabia.

This unwholesome turn of events was brought about not only by Bull himself—a man with torn loyalties and an immense ego—but also by backstage U.S. policies that have converged to put these advanced weapons into the hands of Saddam Hussein while denying them to U.S. forces.

The sleek design of Bull's ERFB (Extended-Range Full-Bore) shells outreach by at least six miles the guns deployed by U.S. and allied forces in the Gulf. U.S. Marines on the Saudi border have been forced to retreat from incoming Iraqi fire because the Iraqi shells travel farther than their own.

In a cruel twist of fate, the U.S. Army rejected Bull's designs in the 1970s, and Bull, increasingly bitter and cynical, turned to pariah states like Iraq and

Scott Malone is an investigative reporter for PBS's "Frontline," which will air a program about Gerald Bull on Tuesday. David Holey, an Israeli journalist, was a Time magazine correspondent for 19 years. Sam Hemingway is a reporter at the Burlington (Vt.) Free Press.

South Africa, which seized on his revolutionary ideas to swiftly—and relatively cheaply—expand their military power.

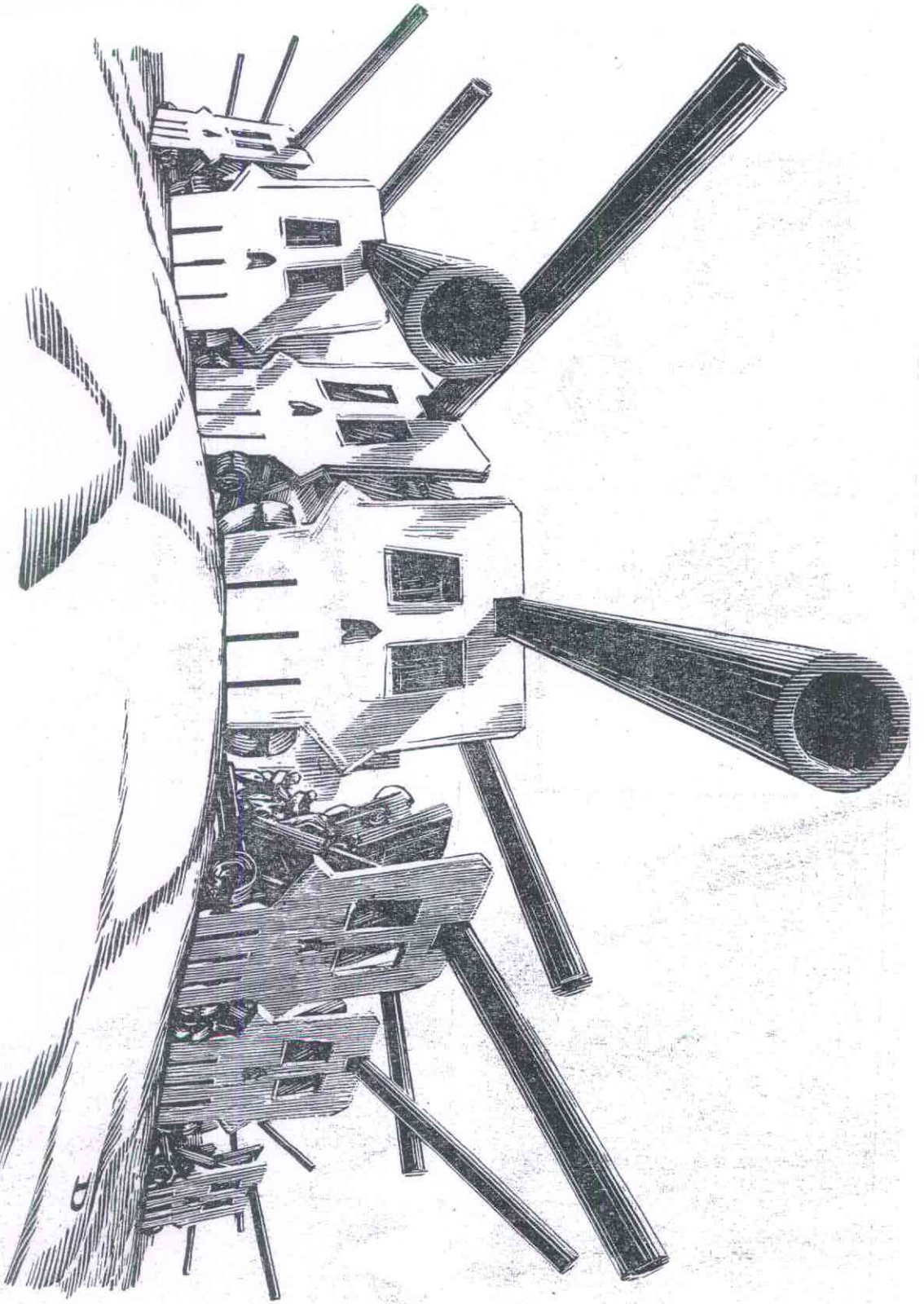
In yet another twist, Bull's obsessive drive to build his long-dreamed-of supergun may have brought on his assassination in Belgium last March 22. [See story on Page C4.]

Bull's ultimate gun design, also originally funded by the U.S. military, was a huge "supercannon," capable of launching satellites into space. Israeli intelligence feared the supergun. Papers found on Bull's body (planted by his assassins, several intelligence sources believe), exposed a network of companies across Europe building components for Iraq for a 450-foot-long supercannon with a muzzle diameter of 1,000 millimeters (more than three feet) and a potential range of 1,000 miles. The revelations about the supergun brought Bull in death the international recognition he so long had sought.

When it came to artillery, Bull's name was synonymous with innovation. Virtually every significant development in artillery since World War II was either his own invention or his improvement. National leaders trained in the Soviet doctrine of massed artillery barrages paid Bull millions for his ideas. Iraq's Saddam was only one of many who rewarded Bull's genius. Saddam has always valued artillery: some 200,000 Iraqis died under his artillery, half the casualties of the bloody eight-year Iran-Iraq war. When Saddam wanted to strengthen Iraq's armies, he turned to Bull.

Born in Canada in 1928, Bull was orphaned at 3 and endured a troubled childhood. But he earned a PhD in aerodynamics from the University of Toronto at the age of 22 and began a career as a brilliant, if prickly, weapons scientist.

See GUNS, C4, Col. 1



BOB DANIA FOR THE WASHINGTON POST

Who Murdered Gerald Bull?

GERALD V. BULL was killed outside his sixth-floor apartment in a fashionable Brussels suburb on March 22, 1990, by two assassins who pumped five 7.65mm bullets from a silenced gun into his neck and back and then escaped.

Who murdered the 62-year-old artillery genius? Suspicion centered on the Israelis, who feared Bull's work for Iraq, or the Iraqis themselves, possibly infuriated by what sources said was Bull's penchant for financial double-dealing.

But no one has stepped forward to claim responsibility. However, senior Israeli intelligence officials in several recent interviews with us have claimed responsibility for the slaying.

One senior military intelligence officer, who demanded anonymity, said the killing was ordered after Mossad, Israel's secret foreign-intelligence service, gathered information that Bull was working with Iraq in the "production and acquisition of mass destruction weapons for Iraq, aimed at us."

Israeli worries centered on Bull's attempt to construct a "supergun" with a 1,000mm muzzle—more than a yard across—that might fire shells with chemical, biological or atomic warheads hundreds of miles into Israel from Iraq. Far-fetched though the idea of such a weapon might sound, similar giant cannons in fact had been built and used in earlier wars—and Bull had carefully studied these designs.

For example, in 1985 Bull had been given the long-hidden designs of a legendary German supercannon of World War I. Called the Kaiser's Paris Gun, it had been fired with devastating effect. At the war's end, the Germans had dismantled it and hidden the plans.

According to a retired British intelligence officer, Bull also had reconstructed British reports on two captured Nazi superguns of World War II, including the so-called "V-3," envisioned by Hitler as a terror weapon to be used against England with the V-1 buzz bomb and the V-2 rocket. Built on the French coast, the V-3 was destroyed by RAF bombers before it could be used. Robert Turp, a retired major in MI-10, the British technical-intelligence service, said he and Bull spent long hours discussing the reports on the Nazi designs.

A supergun would fit Saddam Hussein's arsenal perfectly, said former Israeli artillery chief Avraham Bar-David. "They don't have air superiority [over Israel] . . . The solution they can have is the supergun. It [has] such long ranges, it's going to hit strategic targets [like Israel]."

Israeli intelligence sources say intense surveillance and eavesdropping began against Bull at least a year before the slaying. They said they learned that Bull had let contracts worth millions of dollars with firms all over Europe. By the fall of 1989,

according to various Swiss, German, Italian and British businessmen, Bull had arranged for Iraq to sign contracts for everything from hydraulic cylinders and forging presses to recoil mechanisms and other gear.

Forty-four massive segments of specially-hardened steel tube—each 1,000mm in diameter—had been quietly sent to Iraq from Britain before Bull's slaying. Shortly after his death, British authorities stopped eight more segments manufactured by Sheffield Forgemasters from going to Iraq, an intervention that may have spiked the supergun project.

Baghdad still claims the segments were oil production gear. But recently uncovered documents include a memo from ballistics engineer Denis Lyster to Bull described results of a test firing of a smaller 350mm system and suggests that "we . . . expedite manufacture of a pilot lot for the 1,000mm system . . ."

Bull had visited Iraq shortly before his slaying. A former Bull engineer, Christopher Cowley, says Bull told him he had received anonymous telephone threats if he did not break off his Iraqi projects.

No suspects have ever been publicly identified in the killing. The Israeli government refuses to comment on the Bull assassination. "We have no comment on such speculations," an Israeli Embassy spokesman in Washington said last week.

—William Scott Malone and David Halevy

"Basically," says longtime friend Dr. Charles Murphy of the U.S. Army Ballistics Research Laboratory, "he was always right and you were wrong."

Bull's brief early work for the U.S. military was crowned by a signal achievement: Assisted by the then-chief of Army research and development, Lt. Gen. Arthur Trudeau, Bull designed a 120-foot-long gun that in the mid-1960s fired a projectile 112 miles into space—still a world record. But when the Vietnam War and the space program's use of rockets to launch satellites choked off funds for further tests, Bull blamed the Americans for thwarting his hopes to create a satellite-launching super-gun.

He set out to develop and market conventional artillery on his own. Bull's Space Research Corp. (SRC), on an 8,000-acre compound straddling the U.S.-Canadian border near the Vermont hamlet of North Troy, quickly got some \$11 million in U.S. defense research contracts. In two competitions, his revolutionary 155mm-shell design outshot the U.S. Army's M198 cannon system "hands down," according to knowledgeable sources. But the Army spurned his system and stuck with its own less powerful guns.

However, in the 1970s and '80s, U.S. officials quietly sent South Africa, Iraq and China to Bull's door, allowing them to equip their forces with the long-range cannons the Pentagon wouldn't buy. South Africa sought U.S. help after forces of the Marxist government of Angola and its Cuban allies used Soviet artillery and rocket launchers to repel a South African-led invasion of Angola.

According to former CIA officers involved in the operation and U.S. law enforcement officials who later probed it, a U.S. Marine major, John J. Clancey III, who was part of the CIA's covert "Angola Task Force," led the South Africans to Bull.

Bull's SRC and Armscor, a South African munitions maker, signed a contract on April 7, 1976 for advanced artillery shells. With what sources describe as help from his original mentor, Gen. Trudeau, Bull quickly obtained a "letter of waiver" from the State Department's Office at Munitions Control (OMC) in Arlington, allowing SRC to export shell "forgings" without an OMC license. Bull also quickly got approval for an order of 65,000 rough-finished 155mm shells from the U.S. Army munitions plant in Scranton, Pa., and had them shipped to the Vermont complex, where they were further machined and refined. According to his son Michel, Bull had been "led to believe it was the thing to do . . . that the U.S. had a passive policy to more or less favor these type of things in order to save the last bastion of capitalism in Africa."

But when press reports later revealed that



PAUL LEHTO/BURLINGTON FREE PRESS

Gerald V. Bull: murdered supergun designer

the munitions had gone to South Africa despite a U.S. trade embargo, the Customs Service began probing SRC. Bull enlisted Trudeau, who had once headed Army intelligence, and Richard Bissell, former deputy director of the CIA, to take his case to the highest levels of the Carter administration. Within a few months, Lawrence Curtis, the Customs agent who headed the Bull probe, found that his ambitious plans for wide-ranging indictments of numerous individuals and firms in three countries for arms-export crimes had come unraveled.

Bull and one other individual were allowed to plead to reduced charges, a move that resolved the case quickly but also eliminated any possibility that a trial could produce potentially embarrassing revelations about any involvement of U.S. agencies with Bull's munitions exports.

"I was totally surprised, very disappointed and bewildered," says Curtis. Trudeau has repeatedly declined to be interviewed about his work for Bull.

The House subcommittee on Africa subsequently discovered that State's OMC had been told of the Bull-South Africa scheme three years before the shipments were reported

publicly—and had done nothing. "The preponderance of evidence was that [through] the CIA [introduction], the United States was turning a blind eye," recalls subcommittee chairman Howard Wolpe (D-Mich.) "The United States government was totally negligent in enforcing American law."

Bull pleaded guilty to one count of smuggling 30,000 shells, two cannon barrels and a radar van to South Africa without a license. Federal prosecutors did not recommend jail, but the judge put him away for six months anyway, a ruling Bull's Canadian attorney, Richard Holden, later said "just absolutely infuriated"

Bull. When he left jail in 1981, Bull was contemptuous of the United States, telling a Canadian interviewer, "The U.S. has obsolete conventional weapons and no morale in their armed forces. They couldn't defeat Timbuktu in a fight."

Even though Bull's U.S. and Canadian operations had shut down after going bankrupt, the scientist's reputation was spreading. He reopened his enterprise in Brussels and soon prospered, taking in more than \$100 million in contracts in the 1980s. His designs for a towed 155mm howitzer with a range of 24 miles were sold to Austria's state-owned Voest Alpine steel works for \$5 million. As early as 1979, Bull had advised the Austrians to market the gun in Iraq. In 1982, Voest Alpine reported the sale of 200 of the cannons, now called GHN-45s, to Jordan.

But the Austrian government knew the actual buyer was Saddam. According to a still-classified Austrian report, Saddam, whose war with Iran had bogged down, met with the Austrian interior minister in April 1982 and demanded to know, "Where are our guns? Can't you speed up delivery? We require them urgently."

Voest Alpine was Austria's largest state-owned industry. But facing slumping sales and layoffs, it made a risky secret decision to violate neutral Austria's ban on selling weapons to belligerents and in the next few years sold Bull cannons not only to Iraq, but also to Iran. Today, two former Austrian chancellors and various other cabinet ministers have become the subject of the largest criminal investigation in Austrian history.

Documents and records in the Voest Alpine sale of 200 GH N-45s to Iran indicate that the Reagan administration, pursuing its "tilt" toward Iraq in the Iran-Iraq war, quietly eased the sale of the guns to Iraq but sought to prevent the Austrians from selling Bull's guns to Iran.

In an unusual move in early April 1986, CIA and State Department officials showed Austria's ambassador to Washington classified satellite photographs of 15 GHN-45s at Iran's Isfahan artillery training center. A CIA narrative stamped "TOP SECRET—SENSITIVE" with the photos declared, "We believe that significant amounts of the extended-range full-bore ammunition were purchased along with the guns." But the Iranians got an estimated 180 GHN-45s anyway.

Meanwhile, Bull began to reap business with China. The Chinese had long been fascinated with Bull. Indeed, during a visit to a test range in northern Manchuria in 1983, he was amazed to find that the Chinese had collected all his academic papers dating back to the early

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1950s. During four years working with the Chinese arms maker Norinco to set up a full production line for 155mm cannons, Bull was entertained lavishly, had his picture taken with Deng Xiaoping, and even taught a course at Nanjing University.

But his China work posed legal risks. The U.S. Congress had made him a naturalized citizen in the early 1970s, largely because of his access to classified national-security information. This meant he needed a munitions-control license if any technology to set up production was of U.S. origin or substantially American-made. Trudeau went on another high-level Washington mission for Bull.

In April 1982, Trudeau and Bull protegee Denis Lyster met with Hugh Montgomery, director of State's Bureau of Intelligence and Research (INR), and Richard Armitage, assistant secretary of defense for international security affairs, and pressed the view that since all the technology was Canadian, no U.S. export license would be needed for the China project.

Although officials of State's Office of Munitions Control just a month earlier had testified to a House subcommittee that Bull's technology was "indeed American," nothing was done to prevent Bull from pursuing the Chinese project; OMC eventually issued him an export license for some of the computer-related data.

By 1984, Bull, aided by Voest Alpine, had the China 155mm project well underway. Customs agent Curtis, acting on a tip, stopped Lyster at a border crossing from Canada. Agents found in his briefcase a signed \$25-million contract to send ERFB technology to China. Every page bore the initials GVB—Gerald V. Bull.

Customs then seized hundreds of documents and other data from Lyster's home and office, all showing repeated delivery of U.S. technology to China. In August 1984, a federal grand jury was empaneled in Rutland, Vt., to hear evidence in the case.

OMC officials later "advised Curtis that 85-90 percent of 103 documented violations do constitute U.S. Munitions List technology and/or technical assistance," a Customs report stated. But once again, Curtis found his investigation stymied by other federal agencies. Bull's lawyer, Holden, later said federal prosecutors told him they were "just going through the motions" of an investigation.

"The case simply died," says a still-frustra-

ted Curtis, who resigned from the agency in disgust last July.

A few months later, in the summer of 1985, a major inter-departmental meeting was convened at the Pentagon to discuss expanding U.S. munitions exports to China. According to a source who was present, the group decided to "actively" help rebuild the Chinese military and to "overlook . . . prior indiscretions by private companies."

By 1986, the Pentagon was even helping complete China's Bull-designed 155mm production line. According to a U.S. defense consultant involved in the project, the Army issued a U.S.-funded foreign military sales contract to a California firm to provide China a "155mm artillery fuse manufacturing line." "Initially, I was surprised," this consultant said, "I thought Norinco only made 130s [smaller guns], so why were they building 155mm fuses when they didn't have 155s? Well, the U.S. government knew they were building 155s prior to 1986."

Barely a year later, said the consultant and Israeli intelligence sources, Norinco had made its first sale of the so-called WAC 21, Bull-designed guns—to Iraq. According to a person associated with Bull's work in Iraq, the scientist soon caught the attention of Kamil Husayn, an influential cousin and son-in-law of Saddam, with a proposal that Bull, Norinco and a Spanish firm build a huge 203mm self-propelled howitzer for Iraq.

A prototype, called the Al-Fao, was displayed to foreigners at a Baghdad weapons show in 1989; it is not known whether this big cannon is in production. But by early summer 1988, Bull had signed contracts with Iraq to produce not only conventional artillery, but also the 1,000mm supergun.

According to former Bull engineer Christopher Cowley, who worked in Iraq's new cannon-shell and gun-barrel factories, Saddam's "long-term objective" was to insure that "his army on a day-to-day basis cannot be affected by an arms embargo."

Cowley says he concluded that Saddam has the capability to make shells, propellant, explosives, fuses, even replacement barrels. "He has all of the artillery that he would require. So, in that area he certainly is self-sufficient."

Christopher Foss, editor of Jane's Armour and Artillery in London, who attended the May 1989 Baghdad weapons show where the 203mm cannon was shown, said Iraq's home-grown, Bull-designed artillery systems astonished many western experts.

Cowley and others say Bull also helped Saddam modernize his aging arsenal of Soviet-made 130mm cannons by designing a kit, made in Yugoslavia, allowing the conversion of up to 1,000 old guns with new 155mm barrels.

Of an estimated 3,700 Iraqi artillery pieces, some 520 are Bull-designed long-range 155s: 200 South African G-5s and G-6s, 200 Austrian GHN-45s and about 120 Chinese WAC 21s. All the guns, many with interchangeable shells and barrels, can outshoot U.S. and coalition guns. Saddam's artillery forces are armed with chemical warheads, although Iraq is not reported to have fired any so far. The Desert Storm air campaign has now begun to target Saddam's artillery, although coalition briefers have declined to comment on the Iraqi artillery threat.

Cowley and Michel Bull say they kept the State Department informed of their Iraqi artillery work. Cowley said they met with OMC officials in March and April 1988, before work began on the Al-Fao gun. "I personally went to OMC many times," said Michel Bull.

Senior State Department officials described Gerald Bull as little more than a minor irritation after his 1980 conviction. Richard Clarke, assistant secretary of state for political/military affairs, said in a recent interview that he had reviewed the department's Bull file and could discount any CIA role in the South African arms deal.

Clarke said Bull "was no longer associated" with "his former company" after leaving—an assertion at odds with the dozens of cables on Bull's activities that flowed between the DIA, CIA, NSA, State Department and the White House, and by State Department memos of Hugh Montgomery.

Clarke further maintained that Bull was not a U.S. citizen and therefore not subject to OMC jurisdiction. Yet the first State Department cable from the U.S. Embassy in Brussels on Bull's murder reported that Bull held U.S. passport No. 012521295, issued in November 1985 in Washington.

"When he died, he was an American citizen," said Bull's lawyer, Holden.

Rep. Wolpe, who chaired the 1982 Bull investigation, sent a strongly worded letter last September to Clarke's office calling for tighter U.S. technology-export controls. Wrote Wolpe: "We are finding American technology finding its way from South Africa into the hands of other terrorist countries like Iraq . . . a situation where American soldiers are facing cannon, the technology of which was American made." Wolpe has not received a reply.