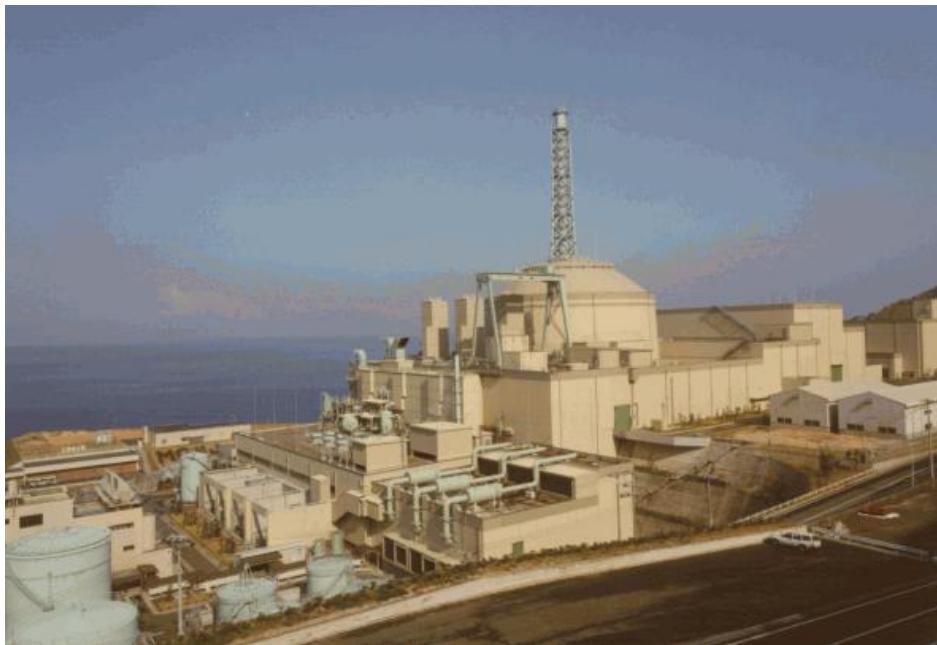


United States Circumvented Laws To Help Japan Accumulate Tons of Plutonium

By Joseph Trento, on April 9th, 2012

National Security News Service |



Monju Nuclear Power Plant

The United States deliberately allowed Japan access to the United States' most secret nuclear weapons facilities while it transferred tens of billions of dollars worth of American tax paid research that has allowed Japan to amass 70 tons of weapons grade plutonium since the 1980s, a National Security News Service investigation reveals. These activities repeatedly violated U.S. laws regarding controls of sensitive nuclear materials that could be diverted to weapons programs in Japan. The NSNS investigation found that the United States has known about a secret nuclear weapons program in Japan since the 1960s, according to CIA reports.



President Reagan and Vice President Bush

The diversion of U.S. classified technology began during the Reagan administration after it allowed a \$10 billion reactor sale to China. Japan protested that sensitive technology was being sold to a potential nuclear adversary. The Reagan and George H.W. Bush administrations permitted sensitive technology and nuclear materials to be transferred to Japan despite laws and treaties preventing such transfers. Highly sensitive technology on plutonium separation from the U.S. Department of Energy's Savannah River Site and Hanford nuclear weapons complex, as well as tens of billions of dollars' worth of breeder reactor research was turned over to Japan with almost no safeguards against proliferation. Japanese scientist and technicians were given access to both Hanford and Savannah River as part of the transfer process.

While Japan has refrained from deploying nuclear weapons and remains under an umbrella of U.S. nuclear protection, NSNS has learned that the country has used its electrical utility companies as a cover to allow the country to amass enough nuclear weapons materials to build a nuclear arsenal larger than China, India and Pakistan combined.

This deliberate proliferation by the United States fuels arguments by countries like Iran that the original nuclear powers engage in proliferation despite treaty and internal legal obligations. Russia, France, Great Britain as well as the United States created civilian nuclear power industries around the world from their weapons complexes that amount to government-owned or subsidized industries. Israel, like Japan, has been a major beneficiary and, like Japan, has had nuclear weapons capabilities since the 1960s.

A year ago a natural disaster combined with a man-made tragedy decimated Northern Japan and came close to making Tokyo, a city of 30 million people, uninhabitable. Nuclear tragedies plague Japan's modern history. It is the only nation in the world attacked with nuclear weapons. In March 2011, after a tsunami swept on shore, hydrogen explosions and the subsequent meltdowns of three reactors at the Fukushima Nuclear Power Plant spewed radiation across the region. Like the bombs dropped on Hiroshima and Nagasaki, Japan will face the aftermath for generations. A twelve-mile area around the site is considered uninhabitable. It is a national sacrifice zone.



The Fukushima I Nuclear Power Plant after the 2011 Tōhoku earthquake and tsunami

How Japan ended up in this nuclear nightmare is a subject the National Security News Service has been investigating since 1991. We learned that Japan had a dual use nuclear program. The public program was to develop and provide unlimited energy for the country. But there was also a secret component, an undeclared nuclear weapons program that would allow Japan to amass enough nuclear material and technology to become a major nuclear power on short notice.

That secret effort was hidden in a nuclear power program that by March 11, 2011 – the day the earthquake and tsunami overwhelmed the Fukushima Daiichi Nuclear Plant – had amassed 70 metric tons of plutonium. Like its use of civilian nuclear power to hide a secret bomb program, Japan used peaceful space exploration as a cover for developing sophisticated nuclear weapons delivery systems.

Political leaders in Japan understood that the only way the Japanese people could be convinced to allow nuclear power into their lives was if a long line of governments and industry hid any military application. For that reason, a succession of Japanese governments colluded on a bomb program disguised as innocent energy and civil space programs. The irony, of course, is that Japan had gone to war in 1941 to secure its energy future only to become the sole nation attacked with nuclear weapons.



Energy has always been Japan's Achilles' heel. Her need for oil in the face of an American embargo triggered Japan's attack on Pearl Harbor, and the continued shortage was a recurring theme in her defeat in that war. Only one act could take more credit for Japan's humiliation – the splitting of the atom that gave birth to the nuclear bomb. Now Japan would turn that same atom to its own purposes — to ensure a stable source of energy well into the next century and, equally important, to ensure that the homeland never again suffered the indignity of defeat.

Japan approached the nuclear problem the same way it tackled the electronics and automobile industries. A core group of companies were each given key tasks with long-term profit potential. Then the government nurtured these companies with whatever

Tokyo Electric Power Company

financial, technological and regulatory support needed to assure their success. The strategy worked brilliantly to bring Japan from post-war oblivion to economic dominance in a single generation.

The five companies designated for the development of nuclear technologies had to make major strides beyond the conventional light water reactors that had become fixtures in Japan under U.S. President Dwight Eisenhower's Atoms for Peace program in the 1950s. Japan would have to do what the Americans and Europeans had failed to do – make an experimental breeder program a commercial success. Their hubris convinced them that they could. The Japanese, after all, were the masters of the industrial process. They had turned out automobiles, televisions and microchips superior to the Americans, with better quality and at less cost. Nuclear accidents are almost always the result of human error: sloppy operators without the proper education or training or who did not install enough redundancies. Such things happen to Americans and Russians, but not to Japanese.



As China, North Korea, India and Pakistan developed nuclear weapon systems, Japan and her Western allies strengthened their alliances to counter the burgeoning threat. From a secret meeting between U.S. President Lyndon Johnson and Japanese Prime Minister Eisaku Sato in the 1960s and the participation of several subsequent American and Japanese leaders, the secret transfer of nuclear technology was part of an international strategy to fortify Japan against an ever-escalating East Asian arms race. This policy culminated during the Reagan administration in legislation that dramatically changed U.S. policy. The United States ceded virtually all control of U.S.-origin nuclear materials shipped to Japan.

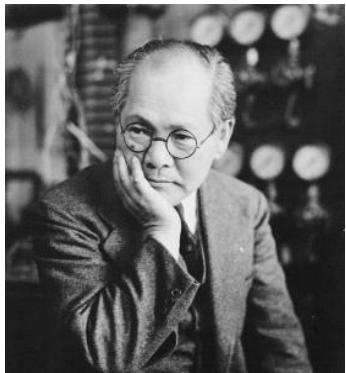
To the detriment of the world and her people, the Japanese government exploited the Japanese public's well-known abhorrence of nuclear weapons to discourage the media and historians from delving into its nuclear weapons activities. Consequently, until the March 2011 tragedy, the Japanese nuclear industry had largely remained hidden from critical eyes. The less than thorough International Atomic Energy Agency, the world's proliferation safeguard agency, also turned a blind eye.

Japanese Prime Minister Eisaku Sato

In a rare glimpse of a Japanese industry that has remained top secret for so many decades, our investigation raises serious concerns about Japanese and Western nuclear policies and the officials who shaped those policies during and after the Cold War. International corporations and officials sacrificed the safety and security of the public to carry out the deception. Under the guise of a peaceful nuclear power program, they made huge profits.

F-Go: The First Japanese Nuclear Weapons Program

In the early 1940s, with the world locked in the bloodiest conflict in human history, scientists in Germany, Great Britain, the United States and Japan struggled to unlock from the atom a weapon of almost inconceivable power. This race to turn theory into devastating reality formed a secret subtext to the war that destroyed millions of lives using industrial warfare. In the area of theoretical physics, Japan was as advanced as her European and American rivals. She lacked only the raw materials and the sheer industrial excess to turn those materials into an atomic bomb. But Japan's war machine was nothing if not resourceful.



Since 1940, the Japanese had been aggressively researching the science of the nuclear chain reaction. Dr. Yoshio Nishina had been nominated for the Nobel Prize for his pre-war work in nuclear physics. Now he and a team of young scientists worked tirelessly at the Riken, the Institute of Physical and Chemical Research, to beat the Americans to the bomb. After two years of preliminary research, the atom bomb program called F-Go began in Kyoto in 1942. By 1943, Japan's Manhattan Project had not only produced a cyclotron that could separate bomb-grade uranium, but also had developed a team of nuclear scientists with the knowledge to unleash the atom's unknown power. As America built a uranium enrichment plant in the Washington desert so enormous it drew every watt of electricity from the Grand Coulee Dam, the Japanese scoured their empire for enough raw uranium to make their own bomb, with only limited success.

Yoshio Nishina

Japan looked to Nazi Germany for help. The Nazis, too, had been pursuing the nuclear bomb. But, by early 1945, the Allies were on the Rhine and the Russians had taken Prussia. In a last-ditch effort, Hitler dispatched a U-boat to Japan loaded with 1,200 pounds of uranium. The submarine never arrived. American warships captured it in May 1945. Two Japanese officers on board the submarine committed suicide and the shipment of uranium was diverted to Oak Ridge, Tennessee, for use in the American Manhattan Project. Without the uranium, Japan could not produce more than one or two small atomic bombs.

As the bomb programs in both countries neared completion in 1944, General Douglas MacArthur's island-hopping campaign drew closer to Japan's home islands. Fleets of B-29 bombers rained fire on Tokyo and other major cities. Nishina had to move his effort to the tiny hamlet of Hungnam in what is now North Korea. The move cost the Japanese program three months.

On August 6, 1945, the Enola Gay dropped a single atomic bomb over Hiroshima. The blast killed more than 70,000 people outright, and in the days and weeks to come thousands more succumbed.

When word of the blast reached Nishina, he knew immediately that the Americans had beaten him to the prize. But he also had implicit confirmation that his own atomic bomb could work. Nishina and his team worked tirelessly to ready their own test. Historians such as Robert Wilcox and Atlanta Journal Constitution writer David Snell believe that they succeeded. Wilcox writes that on August 12, 1945 – three days after the Nagasaki bombing and three days before Japan signed the articles of surrender – Japan tested a partially successful bomb in Hungnam. By then the effort was merely symbolic. Japan lacked the means to produce more weapons or to deliver them accurately to the United States.

As Japan rebuilt after the war, the atomic bombings of Hiroshima and Nagasaki came to represent the folly of Japan's imperial aspirations as well as American inhumanity toward the Japanese. The Japanese people held nuclear weapons in abhorrence. Japan's leaders shared that view, but, having been on the receiving end of nuclear warfare, also developed a special appreciation for the bomb's strategic value.

As the war ended, thousands of American troops occupied Japan. After the nuclear attacks on Japan, the United States feared that the desire and ability to create this power would spread throughout the world. Washington learned that Japan had been much closer to its own nuclear bomb than previously thought. Destroying Japan's nuclear-weapons capability

became a high priority. In addition to negotiating international non-proliferation agreements, U.S. occupation troops destroyed several cyclotrons and other vestiges of Japan's atomic bomb project to prevent Japan from resuming its nuclear program. Though the troops could demolish the physical remnants of the F-Go project, they could not destroy the enormous body of knowledge Nishina and his team had accumulated during the war.

The Beginning the Japan's Nuclear Program

In the years to come the men behind F-Go would become the leaders of Japan's nuclear power program. Their first priority was to stockpile enough uranium to ensure that nuclear research could continue in Japan.

The war and the atomic blasts that ended it left a strong and enduring impression on the Japanese people. They abhorred the destruction of Hiroshima and Nagasaki. But the Japanese leadership recognized that in nuclear power there was an alternative to foreign energy dependence, a dependence that had hindered Japan since her entry into the industrial era.

With the surrender of Japan, the United States became the preeminent power in the Pacific. But that position was challenged in 1949 with the communist victory in China and successful nuclear tests by the Soviet Union. The communists were challenging America in the Pacific, and Japan suddenly shifted from vanquished adversary to valuable ally.

The United States was completely unprepared when North Korean troops swarmed south in 1950. Soon poorly armed, under-trained American Marines were surrounded in Pusan with their backs to the sea. For the first of many times during the Korean War, the American military commander, Gen. Douglass MacArthur, lobbied President Truman to use nuclear weapons.

Those weapons were stored on the Japanese island of Okinawa. While American troops faced annihilation in Pusan, American B-29s waited with engines running to bomb targets in China and Korea. Later in the war, when Chinese troops entered Korea, nuclear-laden bombers flying from Japan would actually penetrate Chinese and North Korean airspace. One jet fighter bomber was shot down.

The Korean War is an important milestone for Japan. Only seven years after the most humiliating defeat in its three-thousand-year history, Japan served as the staging ground for the same military that had defeated her. Japan's own military at the time was practically nonexistent. As humiliating as the American servicemen who frequented Tokyo's nickel brothels was the realization that Japan's defense was wholly in American hands. As Truman played the game of nuclear brinkmanship with the Chinese, it became apparent that Japan's defense now relied on the same nuclear bombs that had sealed her World War II defeat.



In the early 1950s, the United States aggressively urged Tokyo to get involved in the nuclear power business. Having witnessed the destructive power of nuclear energy, President Eisenhower was determined to keep it under strict control. He also realized that the world would never accept a complete U.S. monopoly on atom-splitting technology, so he developed an alternative — Atoms for Peace. Eisenhower gave resource-starved countries like Japan and India nuclear power reactors as a form of technical, economic and moral support. Lacking the indigenous resources to rebuild its economy and infrastructure, Japan quickly turned to nuclear power as the answer for its chronically energy-starved economy.

With the help of the American Atoms for Peace program, Japan began to develop a full-scale nuclear power industry. The Japanese sent scores of scientists to America for training

in nuclear energy development. Desperate to regain a foothold in the international arena and reclaim its sovereignty and power after the war, the Japanese government willingly spent scarce funding on research labs and nuclear reactors.

Japan's wartime experience had prepared her to build a nuclear industry from scratch, but with Atoms for Peace, it was cheaper to import complete reactors from the West.

Atoms for Peace supported British and Canadian nuclear exports as well as American. Britain went first, selling its Magnox plant to Japan. General Electric and Westinghouse rapidly secured the rest of the industry, selling reactor designs and components to Japan at exorbitant prices. The Japanese industry quickly became a model for other Atoms for Peace countries. A generation of brilliant young Japanese scientists came of age during this period, all committed to the full exploitation of nuclear energy.

Once the industry was vitalized, Japan resumed its own nuclear research independent from the United States. Encouraged by the Americans, in 1956 Japan's bureaucrats mapped out a plan to exploit the entire nuclear fuel cycle. At that time the concept was only theoretical, no more a reality than the atomic bomb was when Einstein penned his infamous letter to Roosevelt in 1939. According to the theory, plutonium could be separated from the spent fuel burned in conventional reactors and used to fuel new "breeder reactors." No one had yet been able to make it work, but this was the dawn of the age of technology. Scientists in Japan, America and Europe were intoxicated with the possibilities of scientific advancements. Japan's central planners and bureaucrats were equally enthusiastic. The breeder reactor plan would make the most efficient use of the raw uranium Japan imported from the United States. It would wean Japan from her dependence on American energy and also create an enormous stockpile of plutonium – the most powerful and difficult to obtain bomb material.

Secret Cold War Nuclear Policies



Prime Minister Sato with President Johnson

In October 1964, communist China stunned the world by detonating its first nuclear bomb. The world was caught by surprise, but nowhere were emotions as strong as in Japan. Three months later Japanese Prime Minister Eisaku Sato went to Washington for secret talks with President Lyndon Johnson. Sato gave LBJ an extraordinary ultimatum: if the United States did not guarantee Japan's security against nuclear attack, Japan would develop a nuclear arsenal. The ultimatum forced LBJ to extend the U.S. "nuclear umbrella" over Japan. Ironically, this guarantee later enabled Sato to establish Japan's Three Non-Nuclear Principles: to never own or produce nuclear weapons or allow them on Japanese

territory. The policy won Sato the Nobel Prize for Peace. The Japanese public and the rest of the world never knew that these three principles were never fully enforced, and Sato allowed the secret nuclear weapons program to go on.

In the years to come, thousands of U.S. nuclear weapons would pass through Japanese ports and American bases in Japan. Even before Sato's historic meeting with LBJ, Japan had quietly agreed to officially ignore U.S. nuclear weapons stored in Japan. Japanese officials were shrewd enough to put nothing down on paper, but U.S. Ambassador to Tokyo Edwin O. Reischauer disclosed the pact in a 1981 newspaper interview. In 1960, the Japanese government had verbally agreed to allow nuclear-armed American warships access to Japanese ports and territorial waters. Several current and former U.S. and Japanese officials confirm Ambassador Reischauer's interpretation, including the former Japanese Ambassador in Washington, Takezo Shimoda.

When asked about these issues in the 1980s, the Japanese government flatly denied there was any such understanding and said it was "inconceivable" that it had a different interpretation of the treaty conditions than the United States. Nonetheless, after Prime Minister Zenko Suzuki ordered his Foreign Ministry to investigate the facts, the best it could do was to say it could find no written records of the pact.

Declassified U.S. government documents make a mockery of the Three Non-Nuclear Principles. The papers reveal that Japanese government officials ignored evidence that the United States was routinely bringing nuclear weapons into Japanese ports. American military planners took Japan's silence as tacit permission to carry nuclear weapons into Japanese harbors. The American aircraft carrier *Kitty Hawk*, home ported for decades in Yokohama, routinely carried a small arsenal of nuclear weapons.

Japan even participated in joint military exercises in which U.S. forces simulated the use of nuclear weapons. These revelations underline the dichotomy between the Japanese government's public policies and its actions regarding nuclear weapons.

One of the pivotal debates in Japan during the early 1970s was whether to join the Nuclear Non-Proliferation Treaty (NPT). The treaty basically froze the nuclear status quo. The five nuclear powers retained their arsenals while the rest of the world pledged to abstain from nuclear weapons. More than a hundred countries signed the treaty. The only notable exceptions were the few states that held open the nuclear option: India, Pakistan, Israel and Japan. The debate, like most decisions on these issues in Japan, was not carried out in a public forum. But the Americans were listening, and what they heard put Japan's nuclear ambitions in a completely new light.

Yasuhiro Nakasone was Director of the Japanese Defense Agency and one of a new generation of pro-nuclear politicians. Though he was not in favor of immediate nuclear armament, he opposed any action that would limit Japan's right to develop nuclear weapons in the future. Nakasone was one of the principal authors of a 1969 policy paper that said in a chapter on national security: "For the time-being Japan's policy will be not to possess nuclear weapons. But it will always maintain the economic and technical potential to manufacture nuclear weapons and will see to it that Japan won't accept outside interference on this matter."

Six years later Nakasone was again embroiled in the nuclear debate. At stake was Japan's ability to go nuclear and the biggest prize in Japanese politics – the prime minister's gavel. Nakasone assured his rise to prime minister by outwardly supporting the NPT. The price for Japan's cooperation was President Gerald Ford's pledge not to interfere with Japan's nuclear programs, even when they included material and technology ideally suited to nuclear weapons use. With Ford's guarantee, Japan finally ratified the NPT in 1976. Japan's nuclear commerce continued unabated. The United States continued to supply enriched uranium to Japanese reactors and allowed the spent fuel to be reprocessed in Europe and the plutonium shipped back to Japan, where it was stockpiled for future use in breeder reactors.

Stopping the Spread of Fissile Material



After Jimmy Carter won the presidency in 1976, he instituted an aggressive policy to control the spread of fissile materials. As a former nuclear reactor engineer on a Navy submarine, Carter knew better than any other world leader the immense power locked up in plutonium and highly enriched uranium. He was determined to keep it out of the hands of even our closest non-nuclear allies – including Japan.

Carter had good reason for this policy. Despite Japan's ratification of the NPT in 1976, a study conducted for the CIA the following year named Japan as one of the three countries most able to go nuclear before 1980. Only the Japanese people's historic opposition to nuclear weapons argued against Japanese deployment. Every other factor argued for a Japanese nuclear capability. By now the CIA – and its more secretive sister agency, the NSA — had learned the position of Japan's inner circle.

Jimmy Carter Tours TMI Control Room

Carter knew the incredibly volatile effect plutonium would have on world stability. Plutonium is the single most difficult to obtain ingredient of nuclear bombs. Even relatively backward countries – and some terrorist groups – now possess the technology to turn plutonium or highly enriched uranium into a nuclear weapon. But refining plutonium or enriching uranium is an extremely difficult, costly task. Carter knew that by limiting the spread of plutonium and uranium, he could control the spread of nuclear weapons. He made preventing the spread of plutonium the cornerstone of his nuclear non-proliferation policy.

The Japanese were shocked when Carter entered office and promptly pushed through Congress the 1978 Non-Proliferation Act, which subjected every uranium and plutonium shipment to congressional approval and blocked a host of sensitive nuclear technologies from Japan. Carter was determined not to transfer nuclear technology or materials that Japan could use to make nuclear weapons. The decision was hugely unpopular in America's nuclear establishment as well. America's nuclear scientists had expected much from Carter since he was one of them: someone who knew and understood nuclear energy.

Carter's efforts ended America's plans to reprocess spent nuclear fuel. Carter stopped reprocessing because he feared the consequences of Korean or Taiwan stockpiling plutonium. He believed it would lead to an Asian arms race involving Japan and China as well as Korea or Taiwan.

Carter's U.S. nuclear doctrine was enormously unpopular among America's nuclear science elite, who viewed a plutonium-based fuel cycle as the future of nuclear energy. They saw the atom as the solution to the problems that had stalled America's great economic boom – acid rain from coal, shortages and embargos of oil. With an almost inexhaustible supply of cheap, clean nuclear energy, America would reclaim its position as the world's unquestioned economic leader. But for many it went beyond even that. If America could complete the fuel-cycle – complete the nuclear circle, all of humanity could be lifted up by the nuclear bootstrap. At research centers around the country and in the Department of Energy's Forrestal Building on Washington's Independence Avenue, enthusiasm for the breeder program reached almost a religious crescendo.

If the breeder reactor was going to revolutionize the world's nuclear economy, went the thinking in America's nuclear establishment, the United States would have to share it with her allies in Europe and Japan. The very cornerstone of science is the free exchange of information, and the American scientists shared openly with their European and Japanese colleagues. The cooperation ran both ways. The breeder reactor was proving to be a monumental technical challenge, and DOE was eager to learn from the mistakes of Germany, Britain and France, all of which had been working on the problem nearly as long as the United States. Carter's policies hindered America's efforts to develop and share a plutonium-based nuclear energy cycle.



To the chagrin of the powerful nuclear weapons and nuclear power lobbies, Carter abandoned the idea of a new nuclear renaissance. Carter's administration ushered in an era of reduced nuclear trade and an interruption to the free flow of ideas among scientists. For men like Richard T. Kennedy and Ben Rusche at the Nuclear Regulatory Commission and Harry Bengelsdorf at the U.S. Department of Energy, the restraints were completely unacceptable. Jimmy Carter's re-election defeat brought the nuclear establishment another opportunity.

Reversing Course – Reagan Undermines Carter's Policies



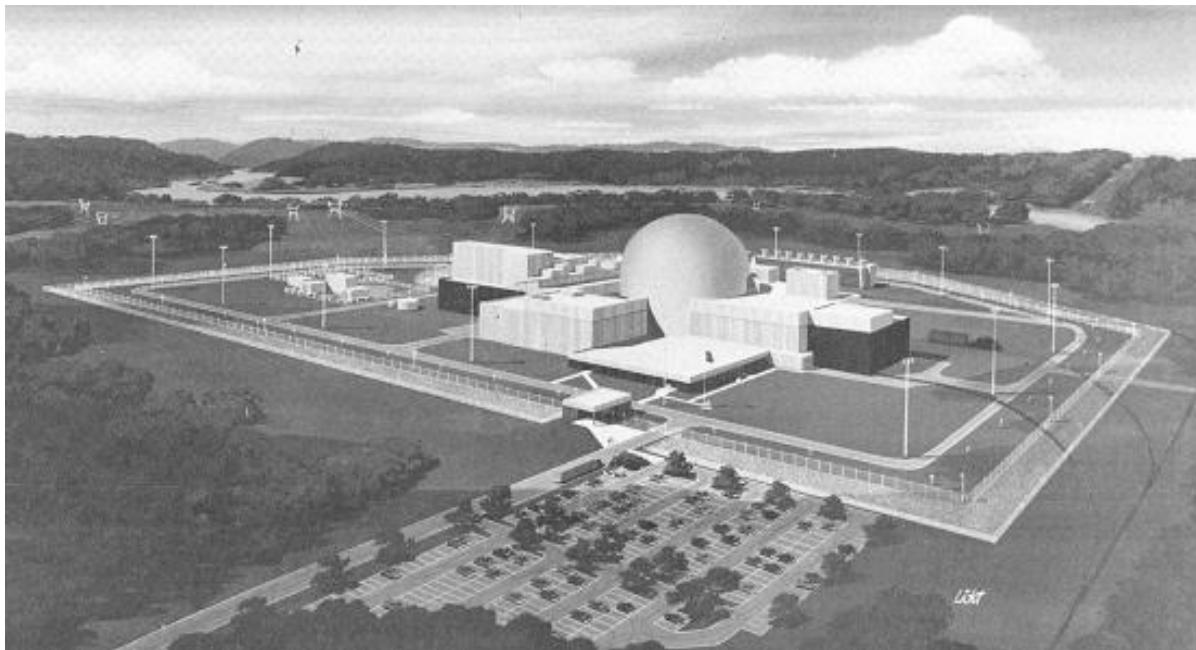
One of the most passionate nuclear believers was a career bureaucrat named Richard Kennedy. A former Army officer, he labored in obscurity at the Nuclear Regulatory Commission, his career held hostage by his vehement opposition to President Carter's nuclear policies. All of that changed after Ronald Reagan's election in 1980. One of Reagan's first acts as president was to effectively reverse Carter's nuclear doctrine, which had barred the United States from using plutonium in civilian power projects with America's friends or adversaries.

Reagan made Kennedy his right-hand man for nuclear affairs. From his new post as Ambassador at Large for Nuclear Energy, Kennedy oversaw the dismantling of the Carter policies he despised. The new administration rejuvenated American and international reliance on plutonium.

Richard Kennedy

But one legacy of the Carter years hobbled America's headlong leap into international nuclear commerce. Carter had pushed through Congress in 1978 the Atomic Energy Act, a sweeping piece of legislation that strictly limited how foreign countries could import and use nuclear materials originating in the United States. Under the Act, Congress had to approve every single shipment of reactor fuel that crossed an international border. The law was an insufferable impediment to Kennedy's vision of unfettered nuclear commerce. So he set out to circumvent it.

In the early days of the Reagan buildup, as the massive injection of cash into America's conventional and nuclear war-making industries dramatically increased, the administration force-fed money to the nuclear scientists designing new warheads and attempting to solve the nuclear breeder reactor conundrum.



Clinch River Breeder Reactor Design

At the center of this plan was an experimental facility at the DOE's Oak Ridge National Laboratory in Tennessee's scenic Clinch River valley. Here in the Appalachian foothills, America's most brilliant scientists were assembling a breeder reactor. The technology held incredible promise. As it generated power, it transformed previously spent nuclear fuel into pure plutonium. The breeder became the Holy Grail of nuclear science, a closed fuel cycle that would open up an almost limitless supply of energy. The Clinch River breeder project was on the cutting edge of technology, and, under Reagan, the Department of Energy flooded the project with money. The project cost \$16 billion dollars between 1980 and 1987. And then, as suddenly as it had begun, Congress stopped the program cold.

Despite the efforts of the country's best minds and nearly limitless budgets, the breeder program did not work. And it was not only the Clinch River team who failed. Breeder programs in Germany, France and the United Kingdom also could not make the leap from lab experiment to commercially viable practice. Reagan's commitment to new nuclear weapons never flagged, but as the mid-eighties recession dragged on, he could not protect every facet of the military industrial complex from congressional cost-cutting. In 1987, Congress pulled the funding on Clinch River. To the cadre of scientists and Energy Department bureaucrats who had made the breeder reactor their life's work, it was a disaster. Yet despite their failure and the nation's lack of support, they remained faithful to the idea of the nuclear fuel cycle.

In the meantime, one country was still doggedly pursuing the breeder technology: Japan. In 1987, the resources of Japan's runaway economy seemed limitless. If any nation could make the breeder economically viable, it was Japan. But if Japanese scientists were to succeed, they would need to start where the Americans had left off.

To understand what happened next requires an understanding of how American government really works. While administrations change every four or eight years and Congress, particularly the House of Representatives, regularly cycles its membership, the bureaucracy rolls on with almost monolithic continuity. In the bureaucracy, careerists can entrench behind their coveted projects to wait out administrations. Before Congress terminated the breeder program, Reagan left its future in the hands Richard T. Kennedy.

Kennedy looked like a Hollywood casting director's version of the Washington insider, says long-time adversary Damon Moglen. "He had the nasty, florid appearance of a man who spent a lifetime in smoky back rooms, and his demeanor reeked of influence peddling. You could have seen him coming out of Tammany Hall." Kennedy's friends were kinder. Ben Rusche, a colleague at the NRC, praised Kennedy's political instincts. "He was very attuned, perhaps to a degree greater than many that were in the business, to political realities both internally and externally." Friend and foe alike agree that Kennedy trampled over lesser bureaucrats who stood in his way. He was the perfect man to orchestrate the salvation of the American breeder program by transferring it part and parcel to Japan.

The plan would require a masterful manipulation of Washington's byzantine bureaucratic process. A technology transfer of this magnitude requires the approval of hundreds of officials at dozens of agencies. But precisely because it is so large and complicated, a canny insider can shepherd it through channels with the aid of a small cadre of true believers. Eight years of joint breeder development with Japan had created a crop of young scientists and bureaucrats passionately devoted to the cause. And Kennedy was still flush with an improbable victory—forcing Congress to allow the sale of nuclear reactors to Communist China in 1985.

Giving to Both Sides – Nuclear deals with China and Japan



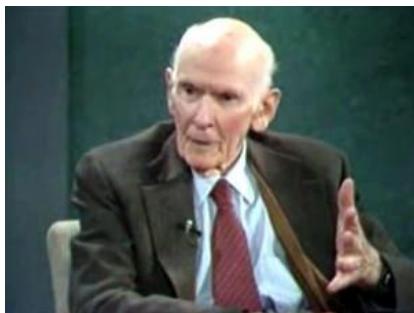
In 1984 the Westinghouse Corporation had struck a deal to supply nuclear reactors to China worth as much as \$10 billion. The deal was an incredible windfall for the American nuclear industry and would be a cornerstone in Kennedy's efforts to make the United States dominate in the world's nuclear commerce. The only problem was China's abysmal record of sharing nuclear secrets with all bidders.

In a bitter session on the Senate floor, then Democratic Assistant Majority Leader Alan Cranston charged that the Reagan administration on Kennedy's watch had "systematically withheld, suppressed and covered up information – known virtually throughout the executive branch – which Congress might find worrisome."

Westinghouse AP 1000 in China

China was already known to have sold nuclear technology to five international nuclear outlaws: Pakistan, Iran, South Africa, Brazil and Argentina. By 1984, Cranston and most of the American government knew that China had given sophisticated nuclear weapons designs to Pakistan. Beijing had also sold the enriched uranium that would find its way into South Africa's nuclear bombs. China sold heavy water for use in Argentina's bomb program, while also selling nuclear materials to arch rival Brazil and negotiating nuclear agreements with Iran. China's nuclear proliferation track record could hardly have been worse, but instead of negotiating ironclad safeguards, Kennedy returned from Beijing with an agreement so ambiguous that both sides could interpret it however they liked. China had refused to sign a non-proliferation pledge or agree to give the United States the right to prevent China from reprocessing fuel burned in the reactors into plutonium for use in nuclear weapons.

Kennedy returned to Beijing in June 1985 to lead the American side of the nonproliferation negotiations. He brought back a new agreement that was almost identical to the first. But \$10 billion projects die hard in Washington, and a threat to cancel Chinese Premier Deng Xiaoping's upcoming visit to Washington provided Kennedy the opening he needed. As the administration promoted its argument that the best way to contain the Chinese nuclear threat was to become its primary supplier, Westinghouse passed out subcontracts that made the deal popular among politicians.



The China agreement had forged Kennedy's inner circle into an administrative juggernaut, and despite the potential rewards awaiting key players in lobbying firms and Japanese-funded think tanks, the nucleus of Kennedy's circle remained in the government. Now with the Japanese breeder program on the line, Kennedy's right-hand man at the U.S. State Department, Fred McGoldrick, and DOE contractor Harold Bengelsdorf, would rally breeder disciples throughout the government. Their goal was to transfer the American taxpayer funded technology of the \$16 billion Clinch River project to Japan's largest utility company for less than one-thousandth the American investment.

Democratic Assistant Majority Leader Alan Cranston

The plan had already been approved, largely by Japanese and American consultants working for the Big Five Japanese corporations.

Two major obstacles stood in their way. U.S. and international law strictly limited the technology developed in the Clinch River program, particularly reprocessing technology used to separate plutonium from spent nuclear fuel. And the plan would require hundreds of international shipments of weapons-grade plutonium and high level nuclear waste on ships.



In the early days of 1986, Kennedy met almost daily with Lewis Dunn, a midlevel functionary in the Arms Control and Disarmament Agency. ACDA had the contract to write the proliferation threat assessment that would determine in large part whether the deal with Japan would survive.

Dunn had committed his career to opposing the spread of nuclear weapons. But like Kennedy, he believed that the best way to manage nuclear technology was to become the world's leading nuclear supplier. In his quiet, determined way, Dunn was as powerful an advocate of

Lewis Dunn, the Arms Control and Disarmament Agency

the Japan agreement as Kennedy. Records of Dunn's frequent meetings with Kennedy remain classified, but Kennedy's calendars reveal an extraordinarily close collaboration between the two men.



Dunn worked for ACDA, a semi-autonomous agency housed in the State Department's office building at Foggy Bottom. At least three times a week for nearly a year, Dunn made the long walk from ACDA's offices on the third floor to Kennedy's corner office. They talked for hours about the threat assessment that Congress would use to decide whether or not to allow the transfer to Japan.

The report Dunn penned made the agency rounds in the middle of 1986 and met with immediate skepticism from the Pentagon, the CIA and the Nuclear Regulatory Commission. The Central Intelligence Agency had been warning for years that Japan had the technology, and perhaps the will, to go nuclear. Contrary to the popular view inside the U.S. government, Japan had never given up the legal right to go nuclear. In fact, in a series of policy papers and internal debates going back to the early 1950s, Japanese policymakers had explicitly reserved the nuclear option. Most tellingly,

an internal planning document that circulated at the highest level of Japanese government in 1969 stated that Japan would maintain —and, if necessary, develop — the technical and financial means to develop nuclear weapons. In an ominous aside, the paper vowed to do so “no matter what foreign pressures were applied.”

The CIA knew of the 1969 planning paper and reams of other evidence that suggested Japan had the will and the means to go nuclear if it felt threatened. Reports the CIA sent to U.S. presidents on the issue beginning in the 1960s shored up the nuclear umbrella commitment Lyndon Johnson had made to Prime Minister Eisaku Sato in 1965. The agency made sure that every president since LBJ knew Japan’s nuclear potential. Yet the warnings rarely trickled down to the working levels of the bureaucracy, where nuts and bolts decisions such as the transfer of the Clinch River hardware and research results were hammered out with Japan.

Getting Around The Department of Defense

The CIA had been skeptical of Japan’s nuclear program for decades. The CIA and NSA eavesdropped routinely on America’s allies as well as her adversaries. Over the years, the CIA had consistently reported that Japan had both the potential and – under the right circumstances – the will to go nuclear.

But in 1987, when Kennedy was pushing hard to accelerate the trade in nuclear secrets and materials with Japan, the CIA was out of the loop. Ironically, the agency that knew the most about Japan’s nuclear potential knew the least about the internal deliberations in the United States about transferring nuclear technology to Japan. The CIA is charged with monitoring foreign governments. While it has never completely restrained itself from spying on rival agencies, in this case the agency knew almost nothing about Kennedy’s internal effort to move the Clinch River project to Japan. Ultimately, the CIA was cut out of the decision. The role of chief opponent belonged to the Pentagon.

State, DOE and ACDA favored wholesale collaboration with Japan, while the Pentagon feared terrorists could hijack sea shipments of bomb-grade plutonium carried between Europe and Japan. Leading the Pentagon’s camp was Fred Ikle, Reagan’s Undersecretary of Defense for Nuclear Programs. Ikle’s concern about terrorist attacks was genuine, but a far greater concern lurked beneath the surface of open debate, a subject so politically unpopular that it was barely raised outside the Pentagon. For years intelligence analysts at DOD and the CIA had believed that Japan was capable of developing a formidable nuclear arsenal. Though few in the administration doubted Japan’s technical abilities, Ikle and a few others were alone in their belief that Japan had the political potential to go nuclear.



Kennedy had one ally in the Pentagon. Captain James Auer was the Japan officer in the Office of the Secretary of Defense. He was the Pentagon’s first authority on all things Japanese. Auer had spent nearly half his 20-year naval career in Japan, first as commanding officer of a guided missile frigate home-ported in Yokohama, and later as a student at the Japanese equivalent of the U.S. Naval Academy. Like many Westerners who come into close contact with Japanese culture, Auer was a convert. He spoke the language, read the literature and became a connoisseur of the Japanese classic dance form, Kabuki.

That talent would serve him well in the Pentagon in 1986, as the American military bureaucracy squared off against the State and Energy departments over Japan. While the civilian bureaucrats viewed Japan as a vibrant and able partner in world affairs, and particularly in the field of nuclear energy, the warriors in the Pentagon held a far darker view. Since the time of the Korean War, the American military had regarded Japan largely as a freeloader that had built its monstrously successful economy on the backs of

Captain James Auer

American servicemen who held the Soviets, Chinese and North Koreans at bay. Before any evidence had been examined, the Defense Department was far less likely to be sympathetic to Japan's case than were the other major agencies in Washington.

The chief exception to this rule was Auer, who as a committed Japanophile was also in exactly the right place to help push the U.S.-Japan Agreement through the Pentagon. Early in 1986, Auer's name begins to appear in Kennedy's official calendar. As the Japan Desk officer at Defense, Auer was privy to almost all of the paperwork and high-level meetings regarding the proposed plutonium deal. He also was in weekly contact with his many friends and colleagues in the Japanese Embassy and at the Big Five corporate offices that served as a shadow foreign service for Japan. It is not clear whether Auer leaked the Pentagon's deliberations or strategy to Kennedy or the Japanese. The Pentagon's chief concern with the U.S.-Japan Agreement was the transport of enormous quantities of weapons-grade plutonium and nuclear waste along sea-lanes that could not be adequately defended.

The Pentagon confronted Kennedy on the security issue. In report after report, the Defense Department concluded that nothing less than a destroyer escort could adequately protect the plutonium shipments. Men like Richard Spear, with twenty years command experience in the Navy, found their warnings overruled by Kennedy and his colleagues on the strength of Lewis Dunn's ACDA analysis. In the only plutonium shipment through the Panama Canal before the U.S.-Japan Agreement entered force, the Navy deployed a small armada to ensure its safe passage. The operation was coordinated by Lt. Col. Oliver North, of Iran-Contra fame. Now, on the force of an analysis conducted almost entirely within Foggy Bottom by Kennedy and Dunn, the United States was preparing to allow hundreds of tons of plutonium and other fissile materials to transit the high seas protected only by a few policemen on a cargo ship.

Frank Gaffney, then a deputy assistant secretary for defense, recalls the Pentagon's reaction to the transport plan as one of almost total resistance. "There was just no way we were going to protect those shipments. It would be too much of a drain on our readiness. And the Japanese were neither willing nor able to stop a determined attack halfway around the world."

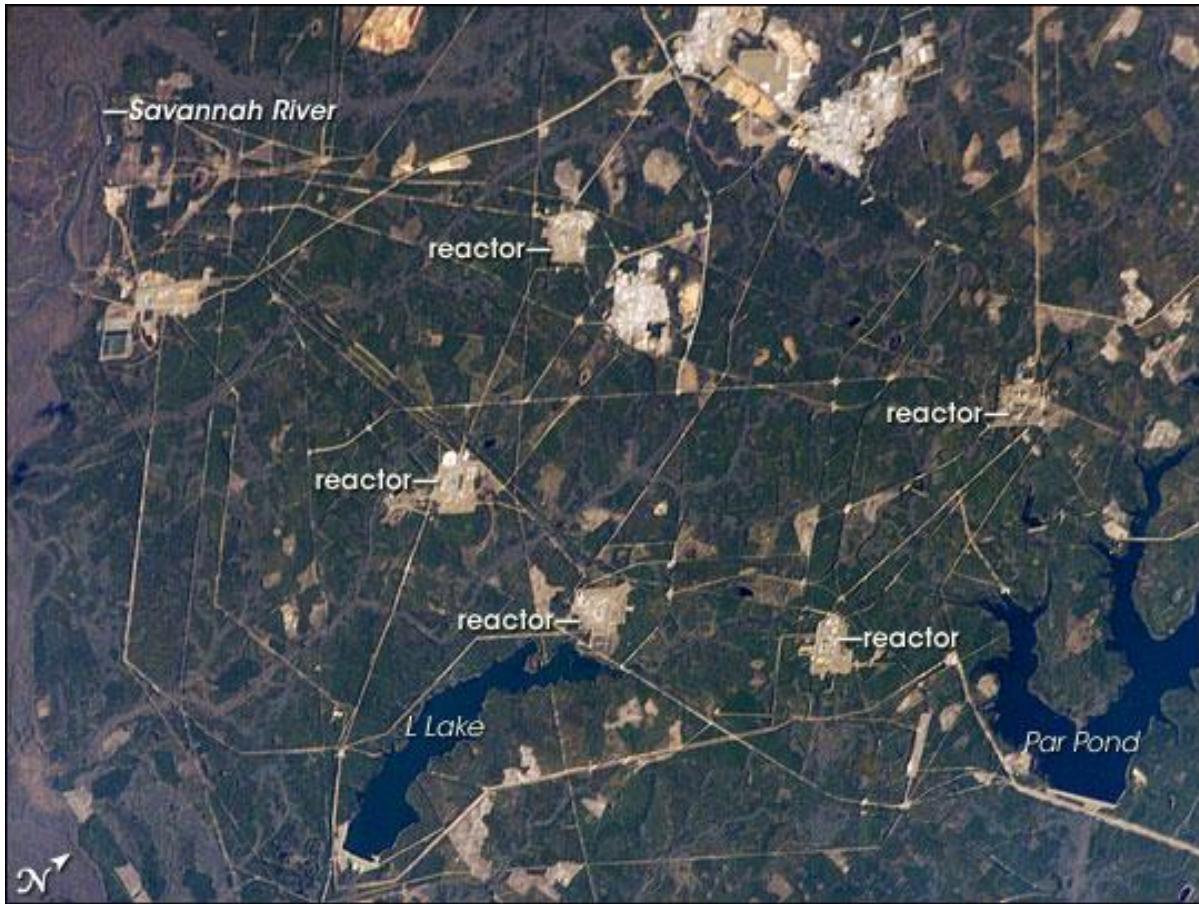
The scenario Ikle and Gaffney foresaw was a slow and poorly armed nuclear transport vessel incapable of fighting off even a lone gunboat. A plutonium laden ship would be at the mercy of any nation or terrorist organization that could get its hands on a World War II-vintage destroyer or even an armed speed-boat.

The Pentagon had favored air transport of the plutonium, but that option had been stymied when supposedly crash-proof casks smashed open in tests. Greenpeace got the test results and took them straight to the media. That ended the Pentagon's favored option of transporting plutonium and high-level nuclear waste by air. The Defense Department also had concerns that the Japanese would use the plutonium in their own weapons program. Except for the CIA, no branch of the U.S. government believed more firmly that Japan could one day go nuclear. But a nuclear Japan was not a deal-breaker for Defense as much as it would be for other agencies. In the ongoing industrial, economic and ideological campaign against communism, Japan was perhaps America's strongest Cold War ally. Although her military was purely defensive, and she did not have the will in 1986 to use it, the long memories at Defense recalled a Japan that had been an extremely formidable military force. Many of the top-ranking officers came from old-line military families and had fathers and uncles who had fought against the Japanese in World War II. If the State Department regarded Japan as an enormous pacifist economic engine, and Energy regarded her as a surrogate womb for its cherished breeder reactor, Defense still saw Japan as a sleeping giant. But this time the giant was on America's side.

A nuclear-armed Japan would relieve much of the drain on American military resources. The need to keep two divisions on the ground in Korea, as well as nuclear armed ships and aircraft in the Pacific as a hedge against China and the missile bases in the Soviet Far East detracted from the Pentagon's chief mission – preparing for all-out war on the plains of Central Europe. The Reagan administration's strategy was to push the Soviet war machine until it broke, taking the Soviet Union and its satellite regimes with it. A more aggressive, nuclear-armed Japan would be a tremendous asset in this effort. So while Defense fought against the sea-shipment of plutonium on tactical grounds, its opposition to plutonium and technology transfer to Japan was only pro forma.

Auer was able to capitalize on this sentiment behind the scenes. Late in 1986, the Pentagon grudgingly signed off on Dunn's report stating that sea transport of plutonium did not constitute a major proliferation risk. The Pentagon was not

the lead agency, Gaffney explains, so even had it fought tooth and nail, State and Energy would probably have been able to muster the support to defeat the opposition, and possibly the career ambitions of its major figures.



Savannah River Site, South Carolina, USA.

The Secrets of Savannah River and Hanford

The Pentagon knew that the Clinch River technology was ideally suited for use in nuclear weapons. Most of the project's theoretical research had been carried out at the Oak Ridge National Laboratory. But the hardware development and much of the hands-on research took place at the plutonium separation canyons at the Savannah River Site near Aiken, South Carolina, and at Hanford, Washington, two of the country's other major nuclear weapons laboratories.

The facilities in Washington State were built to separate plutonium for the Manhattan Project in the early 1940s and had been vastly expanded in a new Savannah River facility in the 1950s and 60s. By the time the Clinch River program was in full swing, the plants that first gave birth to the bombs that leveled Hiroshima and Nagasaki and now were building hydrogen bomb warheads, were accepting dozens of Japanese visiting scientists each year. When the program's demise became inevitable, the Japanese came in even greater numbers.

The breeder reactor runs on plutonium, a substance that is otherwise useful only in nuclear weapons. Any technology that yielded plutonium was by definition a nuclear weapons project. In the United States, such projects are limited to a handful of nuclear weapons facilities owned exclusively by the government. President Harry Truman, recognizing the inherent risk of privatizing nuclear weapons capability, established the American bomb program independent of private industry and the military.

The most sensitive technologies in the Clinch River project were housed on these remote nuclear reservations. And from the very outset, Japanese industry officials wanted onto the American bases to see what they were getting. The U.S.-

Japan Agreement called for a five-year period of cooperation in which Japanese and American scientists would work together on breeder projects, funded largely by the Japanese utilities. The idea, as DOE project director William Burch put it, is to “stay in the ball game.” To stay in the game, the United States would have to play by Japan’s rules. And the specific items Japan wanted came straight from the nuclear weapons program.

On top of the list was sophisticated plutonium separation hardware housed at the Savannah River Site, which had churned out weapons plutonium for a generation. Savannah River built and tested centrifuges, which after further testing at the Argonne National Laboratory, were shipped to Japan for use in the Recycle Energy Test Facility (RETF), a deceptively named plant for separating weapons-grade plutonium from spent fuel. RETF was central to the Japanese breeder reactor plan. The Japanese needed the high-capacity plant to manufacture their own high-grade plutonium. While the plant was under construction, Japan contracted the refining job to France and Great Britain.

America’s experience producing military plutonium at Savannah River was ideally suited for use in the Japanese program. Other U.S. weapons labs have also contributed to the Japanese program. Hanford and the Argonne-West laboratory in Idaho conducted thousands of hours of tests on plutonium fuel assemblies for the Joyo breeder reactor. Japanese scientists were integrally involved in these tests and had virtual free-run of the U.S. nuclear weapons establishment. If Japan does someday deploy nuclear weapons, it will have been made possible by the wholesale transfer of weapons-usable technology through the U.S.-Japan Agreement.



The Agreement between the Energy Department and Japan’s monolithic nuclear energy utility, the Power Reactor and Nuclear Fuel Development Corporation (PNC), violated a laundry-list of anti-nuclear prohibitions. It provided no Japanese guarantee that nuclear material would not be transferred to other countries without American consent, nor any assurance that Japan would not reprocess American reactor fuel into plutonium without prior U.S. approval. In short, the United States abdicated all control of U.S.-origin nuclear material in Japan for the next 30 years.

The deal also violated Carter’s Atomic Energy Act, a U.S. law which mandates that the reprocessing or retransfer of American nuclear material must not increase the risk of proliferation.

US-Japan Alliance Discuss Importance of U.S. Nuclear Umbrella

In particular, the agreement did not ensure timely warning to the United States of any diversion for weapons purposes.

In fact, Japan has lost track of more than 70 kilograms of weapons-grade plutonium at its accident plagued Tokai reprocessing plant – enough to make more than 20 nuclear weapons. In a single agreement, the United States ceded control of nuclear material and gave up whatever safety margin it had to prevent a rapid nuclear deployment. At the time of the transfer, officials in both Washington and Tokyo knew that the only thing the breeder program would produce reliably was plutonium and that it would churn it out in enormous quantities, and in a form twice as pure as the plutonium used in American nuclear weapons.

To the American bureaucrats and scientists who engineered the transfer, it was a coup for science and international cooperation. As always, the concept of a nuclear armed Japan was difficult to believe in light of the atomic devastation of Hiroshima and Nagasaki.

In addition to the wholesale transfer of U.S. fast-breeder and reprocessing technology to Japan, the U.S.-Japan Agreement gave Japan the right to import unlimited amounts of nuclear materials from the United States, reprocess it into plutonium without restriction, and retransfer it to other countries.

Senator John Glenn, who as a former astronaut knew enough science to grasp the implications of the agreement, fought vehemently against it. But Kennedy's people had sent it to Capitol Hill unannounced, only hours before the holiday recess. Most of Glenn's supporters had already left, and he could only stand back and watch as the agreement passed.



The Comptroller General of the United States immediately declared the agreement illegal. President George H.W. Bush signed it anyway. Before signing the U.S.-Japan Agreement, the United States had considered requests to separate plutonium from U.S.-origin fuel on a request-by-request basis. This agreement, instead, gave Japan blanket authority to reprocess and store U.S.-origin nuclear material within Japan, as well as the authority to transfer spent fuel to designated facilities in Europe for plutonium separation.

Soon after the legislation was signed into law, Kennedy and his team were duly rewarded. For James Auer, the Navy captain who had helped Kennedy get the agreement past the Pentagon, it was a great career boost. Auer, soon after passage, traded in his Navy Blue for the tweed jacket of a tenured professor at Vanderbilt University in a new position at a think tank fully funded by Japanese industry. McGoldrick and Bengelsdorf retired from government service several years later and

Senator John Glenn

established a business of their own making hundreds of thousands of dollars as private consultants for the Japanese nuclear industry.

By 1988, when the Senate ratified Kennedy's U.S.-Japan Nuclear Agreement, Japan was one of only a few countries in the world that regarded plutonium as an asset, not a liability. The Soviets and Americans were trying to devise ways to store and secure vast quantities of this long-lived, radioactive element. In places like Germany and Italy, strong public protests compelled governments to store plutonium outside their own national borders.

Japan's Weapons Delivery Program

By the 1970s, Japan began to aggressively pursue a space program. Japan had risen from her World War II defeat to establish herself as a premier manufacturing and technological power. The Jet Age had given way to the Space Age, and a world power like Japan had to have its own space program. The decision, as is almost always the case in Japan, was pragmatic rather than emotional. Communications in the future would depend on satellites, and warfare would be conducted with long-range missiles. By 1969, Japan had already decided to maintain the ability to go nuclear on short notice. From the start, long-range ballistic missiles and satellite targeting abilities were part of that defense architecture.

In 1969 Japan delved aggressively into space, opening the National Aerospace Development Agency (NASDA) and funded it lavishly. The agency's goal was to promote the useful role of space. Japan was not interested in a headlong race to the moon; it wanted satellites for communication and surveillance. And it knew how to get them.

Just as America transferred nuclear technology to Japan under Atoms for Peace, America opened its space secrets to Japan as well. NASDA developed the N-I liquid-fuel launch vehicle with American assistance and used it to loft the Kiku 2 communications satellite in 1977. The feat made Japan the third nation, after the United States and the Soviet Union, to place an artificial satellite in geostationary orbit.

After the successful launch of Kiku 2, NASDA developed the N-II and H-II rockets, to launch various utility satellites for telecommunications, broadcasting, weather monitoring and other Earth observation functions. The H-II — a large-scale and highly efficient international class launcher — has been flying since 1994. The H-II's lift capability corresponded to the ability to launch nuclear payloads to transcontinental ranges. Despite the initial success of Kiku II, Japan's consistent stumbling block was accuracy. Unlike the Americans, and even the Russians, Japanese rocket scientists lacked the ability to consistently place satellites in precise orbits.

Successors to the Kiku II had a history of imprecise, wobbly orbits. Kiku III, designed for a decade of service, exhausted its fuel trying to hold its orbit and fell from the sky after only two and a half years. Kiku IV lasted less than two years. As scientists everywhere do when faced with a hard problem, the Japanese looked for a shortcut. It came with the decline of Soviet communism.

In 1991, the seemingly airtight security of the Soviet space and missile programs was thrown wide open as scientists fled to the West. Japan's secret service capitalized on the chaos and procured the design and some hardware of an SS-20 missile bus, the critical third stage of the Soviets' then most advanced medium-range ballistic missile. With its three warheads, the SS-20 bus was an engineering treasure, from which Japan learned a great deal about missile guidance. They learned from the Russian missile how to place several warheads on one rocket. The technology, called MIRVing, is key to all modern ballistic missile forces. When one missile discharges several warheads to an individual target, it is virtually impossible to defend against it.

Japan also developed the Lunar-A moon probe, a space exploration vehicle that in many ways resembles an intercontinental ballistic missile system. The Lunar-A system was designed to place three probes at exactly determined targets on the moon. The technology is directly transferable to a ballistic missile application. In addition to testing multiple reentry vehicle technology and targeting, the probe could test Japan's ability to produce hardened electronics. The instruments aboard the probe would have to withstand the tremendous pressure of striking the moon's surface and burrowing into the rock. This is precisely the same technology the United States has perfected for its bunker-busting small nuclear weapons, such as the B-61-11 developed for the B-2 bomber. The technology perfected in the Lunar-A mission gave Japan the option to develop nuclear weapons and delivery vehicles as sophisticated as any in the world.



Regional Concerns and Early Nuclear Catastrophes

The mood toward nuclear weapons was changing in Japan. Perhaps the most telling statement was uttered by cabinet minister Hatsumo Hada to then U.S. Ambassador Walter Mondale at an embassy dinner party. Hada, who later became ambassador to China, told Mondale that Japan would have to go nuclear if North Korea obtained the bomb or the regional security situation worsened. The Japanese public would have to be educated, Hada said, but that would not present a problem. The fragility of the

Ambassador Walter Mondale

stability of the area over the years has only increased as China and North Korea's tested nuclear weapons. Japan feels it must be ready to quickly respond in the region. In the early 1980s, when her bubble economy burst, Japan cut back on spending in many areas. But it never abandoned its commitment to nuclear energy. In that area, it was still a world leader.

In the 1990s, the governor of Tokyo prefecture –essentially Tokyo's mayor and one of Japan's most powerful politicians, Shintaro Ishihara, first openly advocated the acquisition of a nuclear arsenal. Surprisingly, there was little public outcry, and the governor was re-elected by a wide margin.

From the very start, the Japanese breeder program was predicated on the belief that Japanese industry could do what the Americans and Europeans had failed to do – run the extremely complicated breeder cycle safely and profitably. That belief was rooted in Japan's national self-confidence, nurtured by two generations of success in manufacturing. Japan's dedicated and educated workforce and its special brand of quality management made it the world leader in a host of industries. Nuclear power generation would, it was believed, merely be one more success, made possible by Japan's superior workers and management.

Thirty years ago even Japan's harshest critics might have agreed that perhaps it could succeed where Western efforts had failed. But that optimism soon faded as a string of nuclear catastrophes demonstrated that nuclear industries are far different than any other. Both the Monju fast-breeder reactor in 1995 and the Tokai reprocessing plant in April 1997 suffered serious, accidental radiation leaks; both accidents were the subjects of attempted cover-ups. Most egregious was

the fire and leak of radioactive sodium at the Monju FBR. Japan's Power Reactor and Nuclear Fuel Development

Corporation (PNC), the government corporation that operated Monju, lied repeatedly to the public about the accident. PNC attempted to suppress video footage that showed the cause of the accident: a ruptured pipe in a secondary cooling system that had spilled an estimated two to three tons of radioactive sodium – the largest such leak in the history of fast-breeder technology. One of the reasons PNC gave for releasing the misinformation was that Monju was too important to Japan's energy program to jeopardize the reactor's operation. In other words, the public's safety was secondary to the breeder program.

Had it not been for a courageous act by a group of Fukui prefecture officials in the early morning of December 11, PNC's attempted cover-up probably would have succeeded.

Tsuruga Nuclear Power Plant

Suspecting a cover-up, the officials entered the plant and secured the videotape. The action came as a direct result of a previous accident at Fukui's Tsuruga Unit I reactor in the early 1980s. Fukui prefecture officials were not permitted to investigate that mishap. When the Monju accident took place, the officials were determined not to be turned away a second time. Following revelations that the agency itself had been involved in trying to withhold the video, a PNC executive committed suicide.

In the midst of the major problems at Japan's nuclear facilities, a military response not seen since World War II came back into the Japanese psyche. In the spring of 1999, Japanese warships fired on North Korean trawlers that had strayed into Japanese waters. This action was the first time Japanese guns had fired in anger since the end of the war. In pure military terms, the engagement was insignificant, but the North Pacific region took notice because it symbolized the reawakening of the Japanese warrior ethic.

Besides Japan, only France, Russia and Great Britain still regard plutonium as an asset. These countries have invested tens of billions of dollars in their commercial reprocessing industry. The United States abandoned its only reprocessing facility in Barnwell, S.C., just outside the gates of the Savannah River Site without ever operating the facility. Only huge government-owned plants in La Hague, France, and Sellafield, England, separate tons of plutonium from spent nuclear

fuel for foreign customers. The biggest of these customers is Japan, which, despite its confidence in its ability to build a breeder reactor, had turned to purchasing plutonium from the British and French.

The plutonium that the French and British reprocessors return to Japan is pure enough to use in nuclear weapons, and some of it comes from uranium mined in the United States. Thanks to the U.S.-Japan Agreement pushed through by the Reagan administration's Richard Kennedy, the United States no longer has any influence over the transport and use of this material.

Barnwell Nuclear Reprocessing Facility

So even after Japan's disastrous nuclear accidents, and despite efforts to limit nuclear weapons and prevent terrorist groups from obtaining nuclear material, U.S.-origin nuclear material is still being shipped to Japan by the ton. Every shipload contains enough plutonium for hundreds of bombs.

Though the Japanese people are among the world's most ardent nuclear weapons opponents, Japan's security is inextricably tied to nuclear weapons. The American nuclear umbrella is currently Japan's last line of defense against



nuclear armed neighbors like China and North Korea. And the Japanese leadership's rationale has been that there is no real certainty that the Americans will step into a nuclear fray to protect Japan. With the possibility of bombs from China or North Korea exploding over its territory, many Japanese leaders have come to consider the nuclear option not merely desirable, but indispensable.

Richard Kennedy died in 1998 and was buried at Arlington National Cemetery. As the years passed his disciples lived lives of comfort. But as these men enjoyed the fruits of their labor for Ambassador Kennedy, the reality of the policies they had created were playing out in a most dramatic fashion.



The Sellafield nuclear reprocessing facility is the British government-owned version of the Savannah River Site. Once dedicated to the production of the world's most deadly substance, plutonium, the key ingredient of nuclear bombs, Sellafield was up until a few years ago the nearby town's lifeblood. Sixty-five hundred people work at Sellafield separating the coveted plutonium from nuclear reactor fuel irradiated in power plants around the world. It is dangerous work. A microscopic particle of plutonium is enough to cause deadly lung or blood cancers. Sellafield produced plutonium by the ton, as well as even greater quantities of other radioactive wastes. Like Savannah River, the British plant spread radiation into the surrounding environment. Since 1952, fish, shellfish, and sea plants in the Irish Sea, and even

Sellafield Nuclear Reprocessing Facility, Seascale, Cumbria, England

the local pigeons, have been heavily contaminated with radioactive waste from Sellafield. The plutonium plant released into the sea 30 billion liters of radioactive waste in a single decade.

The most dangerous result of Sellafield's reprocessing industry is the arms race it may cause on the other side of the world. That is because British Nuclear Fuels Ltd. (BNFL), the government-owned corporation that runs Sellafield, churns out plutonium for the highest bidder. Dr. Frank Barnaby, a retired British nuclear weapons designer, says that the plutonium fuel produced at Sellafield that was repeatedly shipped to Japan was sufficiently pure to be used in nuclear weapons. He explains that both the United States and Great Britain have both built and tested nuclear weapons made with the so-called reactor grade plutonium.

The late Paul Leaventhal, a non-proliferation expert, said the people of Seascale, the town nearest Sellafield, unwittingly supplied plutonium that could have ended up in nuclear bombs, and charged that "the Thatcher British government did it in the name of British jobs."

Ambassador Kennedy's agreement required the ships transporting the materials to be escorted by government ships dedicated to protecting the plutonium from possible terrorist attack. The intent of this language was to require warships to escort the shipments, but, in response to domestic Japanese pressure, the shipping company persuaded the American, British and Japanese governments to allow two transport ships to escort each other. The transport ships are owned by Pacific Nuclear Transport Limited, a subsidiary of BNFL that is partially owned by a consortium of Japanese utility companies that wanted to save money.

The ongoing nuclear commerce between Japan and France and Britain soon became routine. The shipments of thousands of tons of U.S.-origin reactor waste for Japan each year were largely uneventful until the spring of 1995. Beyond profit, there is another reason France and Britain continue to ship plutonium to Japan. If they do not, Russia will. In economic terms, the balance of supply and demand favors Japan, the world's only serious plutonium buyer. Faced with the prospect of a nuclear-armed Japan – and given the bloody history between these nations – Japan's Asian neighbors began buying from Areva, the French government owned reprocessor.

These shipments have not been uneventful.



The Fukushima nuclear disaster was not Japan's first close call with nuclear weapons grade plutonium. Japan came very close to contaminating the Chilean coast on March 20, 1995, when the *Pacific Pintail*, laden with enough waste plutonium to build hundreds of nuclear bombs, tried to head into the protection of Chilean waters during a storm.

On March 20, 1995, Captain Blaine Axton had never seen worse weather in his forty years at sea. His lightly armed trawler, the *Pacific Pintail*, labored in the heavy seas, the 40-foot waves crashing over her bow, the spray flying away horizontally in the storm. He was in the midst of an Antarctic gale off Cape Horn at

Pacific Pintail

the tip of South America – the deadliest ocean in the world – but the weather was only one of Axton's problems.

The *Pintail* was locked in a tense standoff with a Chilean Navy gunboat over the contents of the *Pintail*'s hold: twenty-eight canisters of high-level plutonium-laden radioactive waste, en route from France to Japan. If the *Pintail* were to founder, her toxic cargo could poison the entire west coast of South America. Both Axton and his Chilean counterpart were acutely aware of the potential for disaster.

Through the spray and driving rain, Axton could make out a gunboat flying the Chilean flag. The Chilean captain had already warned Axton that he was authorized to use any means necessary to prevent the *Pintail* from entering Chile's 200-mile exclusion zone. The language was clear to Axton; it was the most polite way of saying "turn around, or we'll sink you or board you."

The Chilean government was determined that if the *Pintail* were to go down, it should be as far away as possible from the South Sea fisheries that are a mainstay of the Chilean economy. The Chilean gunboat captain continued to shout warnings over the Guard Channel. As she battled her way through the sea to take up a firing position against the *Pintail*, her captain was on the radio to Santiago, begging for permission to open fire. It did not come. As Axton gambled, the Chileans were not about to put a cargo of nuclear waste at the bottom of their sea. The sea was so rough that both ships were struggling just to stay afloat. A boarding party was out of the question. The Chilean gunboat had no choice but to let her continue into Chilean waters, where the *Pintail* survived the storm in the lee of the Patagonian coast. Tellingly, when the storm-battered *Pintail* arrived in Japanese waters two weeks later, with a typhoon building in the east, her Japanese owners ordered the *Pintail* to wait out the storm 300 miles from Japanese shores.

In September 2010, France's Areva loaded the first plutonium-based mixed-oxide (MOX) fuel into Reactor Number 3 at the Fukushima Daiichi Nuclear Power Plant. As the years passed more and more Japanese leaders have become bolder in their pro-military and pro-nuclear pronouncements. In the weeks leading up to the March 2011 tsunami and nuclear disaster, the issue of a nuclear-armed Japan became very public after a Chinese captain was arrested after he rammed Japanese coast guard vessels with his ship. In an interview with the British newspaper, *The Independent*, Tokyo Governor Shintaro Ishihara asserted that Japan could develop nuclear weapons within a year and send a strong message to the world. "All our enemies: China, North Korea and Russia – all close neighbors – have nuclear weapons. Is there another country in the world in a similar situation? People talk about the cost and other things but the fact is that diplomatic bargaining power means nuclear weapons. All the [permanent] members of the [United Nations] Security Council have them."



Ishihara told The Independent the clash, which ended when police released the captain of the Chinese ship accused of ramming the Japanese coast guard vessel, had exposed his country's weakness in Asia.

"China wouldn't have dared lay a hand on the Senkakus [if Japan had nuclear weapons]."

The week before the governor made his comments, Beijing announced that its 2011 defense budget would be increased by 13 percent. Further adding to the tension with Japan is that China officially surpassed Japan as the world's second largest economy in January 2011.

The governor said that a nuclear-armed Japan would also win more respect from Russia, which seized four Japanese-owned islands during the Second World War. And he advised his nation to rid itself of all restrictions in its constitution on the manufacture and sale of weapons. "We should develop sophisticated weapons and sell them abroad. Japan made the best fighters in the world before

Waste and Mox shipments from Europe

America crushed the industry. We could get that back." Japanese nationalists have urged Japan's postwar constitution, written by the United States during the American occupation, be abandoned. It makes Japan initiating war illegal.

A month after the governor made these comments, three reactors at the Fukushima nuclear power plant melted down including Reactor Number 3 with the plutonium-based MOX fuel. For the first time the larger Japanese public began to ask serious questions about the relationship between their government and the powerful Japanese utility companies and their plutonium stockpile.

A year later, more questions than answers remain.



Joseph Trento has spent more than 35 years as an investigative journalist, working with both print and broadcast outlets and writing extensively. Before joining the National Security News Service in 1991, Trento worked for CNN's Special Assignment Unit, the Wilmington News Journal, and prominent journalist Jack Anderson. Trento has received six Pulitzer nominations and is the author of five books, including *Prelude to Terror*, *The Secret History of the CIA*, *Widows*, and *Prescription for Disaster*. Joe currently serves as the editor of DCBureau.org.

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