

Nuclear Nonproliferation:
A Hidden but Contentious Issue in the U.S.-Japan Relationship During the Carter
Administration

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Unless a compromise is reached — there will be profoundly adverse effects on the future of U.S.-Japan relations....Prime Minister Fukuda has publicly called this a ‘life and death’ issue for Japan.¹

Mike Mansfield, Ambassador to Japan, August 13, 1977

Many foreign policy experts believe that the nuclear threat currently posed by North Korea is a bigger threat to national security than terrorism. The tension over nuclear nonproliferation issues in Asia goes back many years and threatened to derail the relationship between the U.S. and Japan during the Carter Administration. The diligent reader of former President Jimmy Carter’s memoirs *Keeping Faith* (New York, 1982) would probably be impressed with the many pages devoted to the describing of the Iran hostage crisis, the negotiation of the SALT II Treaty with the Soviet Union, or the ill-fated plan to withdraw American ground troops from South Korea. U.S. relations with Japan hardly appear in Carter’s version of his presidency, almost as if they were nonexistent. The same can be said after reviewing *Power and Principle* (New York, 1983), the memoirs of Carter’s National Security Advisor, Zbigniew Brzezinski. But was this really the case?

Long before the confrontation between the U.S. and North Korea in the 1990’s over nuclear energy facilities, a similar political battle was brewing between the Carter administration and its counterparts in Japan. Carter was committed to the principles of nuclear non-proliferation and was not about to see one of America’s key allies breach that precept. Japan’s leaders, on the other hand, saw the need for rapid construction and use of nuclear power facilities as vital to the economic interests of their nation, having been reminded of their energy vulnerability by the Arab oil embargo of 1973.

This paper focuses on how nuclear technology impacted the U.S.-Japan relationship during the Carter years, in particular how the Tokai reprocessing facility become a contentious issue during the first year of Jimmy Carter's presidency. This issue threatened to cause "irreparable damage"² between the Carter administration and Prime Minister Takeo Fukuda. It will draw substantially on over 380 recently declassified documents obtained from the National Archive Records Administration and the Jimmy Carter Library.

In view of the fact that there is so little information concerning Japan in the memoirs of Jimmy Carter and Zbigniew Brzezinski, one might conclude that the Carter Administration's relationship with the Government of Japan was without incident. The declassified documents however tell a very different story.³ They reveal just how contentious this issues became and how Carter was forced to work out a compromise with his Pacific ally on the issue of nuclear non-proliferation concerning the Tokai nuclear reprocessing facility in Ibaraki Prefecture near Tokyo.

Some background information on Carter's overall view towards nuclear energy is important to understand what went on during those first eight months of Carters presidency. While Governor of Georgia, Carter maintained strong ties in both the business and political arenas with the Japanese. Carter, a devoutly religious man, had close Japanese friends who had converted to Christianity. The first, Tadeo Yoshida, the President of the YKK Zipper Company, was a well-known philanthropist that invested heavily in the State of Georgia while Carter was Governor. The second was Masayoshi Ohira, the Prime Minister of Japan during the later part of Carter's presidency before his untimely death in 1979. Ohira was a member of the Trilateral Commission during the Tokyo Summit in 1975 when he first met Carter. He would become one of three heads of state that Carter would feel the closest personal ties (the other two were Egyptian President Anwar Sadat and Omar Torrijos of Panama.)⁴

In 1973, Carter was chosen to be part of the Trilateral Commission to bring together business, political and academic leaders from the three developed areas of the world, Western Europe, Japan and North America, to foster dialogue and cooperation on common problems.⁵ In May 1975, Carter was scheduled to attend a meeting of the Trilateral Commission in Japan. At this point, he was already a candidate for the presidency and this trip was to be the only overseas trip of the campaign.⁶

On this trip Carter visited the Diet and was eager to meet with other government leaders, but they were not convinced it was worth their time to meet with him. Eventually Foreign Minister Masayoshi Ohira, Vice Premier Takeo Fukuda and Prime Minister Takeo Miki received him. The most important aspect of that trip was the opportunity it provided for Carter to enhance his relationship with his fellow commission members.⁷ Carter had indeed built up good relationships with high-ranking Japanese businessmen and officials prior to his presidency.

One of the first things Carter did as President was to send Vice President Mondale on a trip to Asia. This was in line with one of the first goals of the new administration, to improve relations with Western Europe and Japan. The Vice President's trip made significant improvements in the relationship with Japan that had floundered because of the Nixon shocks, the unilateral measures imposed by the United States on U.S. - Japan trade.⁸

One of the few references to Japan's nuclear energy policy in either Carter's or Brzezinski's memoirs was a reference by Brzezinski to a weekly report that he gave only to the President. In his weekly report on March 18, 1977, he mentions Japan and reprocessing, "I want to alert you to the extreme sensitivity of the Japanese over the impact of our nonproliferation initiatives. Our new policy has seriously complicated Japan's nuclear power planning and objectives."⁹ Prior to this

reference however, the secret documents revealed that a number of important discussions had already taken place.

The Tokai Dialogue

We begin in late January 1977, soon after Vice President Mondale was sent to Japan. In a secret document from the Department of State, the memorandum of conversations between the Vice President and Prime Minister Fukuda begin the dialogue that would eventually threaten the good relationship. During Mondale's first day of talks, introductions and pleasantries were exchanged. Topics included economic issues and the GNP as well as laying the groundwork for the two administrations to work closely together.¹⁰ On the second day however, one of the main issues was that of the security of the Korean peninsula and the withdrawal of ground forces. During Carter's campaign, he had made many references to pulling troops out of South Korea. The Vice President reassured the Prime Minister that when the President spoke of the withdrawal of ground forces he had always stressed that it would be done in the closest consultation with the governments of both the Republic of Korea (ROK) and Japan.¹¹

Mondale goes on to say in that second day of discussions, that there were several other points he wished to discuss. First, with respect to nuclear proliferation, he said the U.S. had pressed both Germany and France to exercise great care with respect to sales of sensitive materials and technologies, that reprocessing facilities that could produce weapons-grade material were “simply bomb factories.”¹² This was a sensitive topic indeed, and given Japan's history, their decision to develop nuclear energy came with great care. This combined with their almost total dependence on foreign oil meant that they had no choice but to develop alternate-energy sources and nuclear energy was the most viable choice for their self-sufficient energy policy.

This was the first time in the Carter administration's dealings with the Japanese that the subject of nuclear reprocessing was brought up, and one would think that the Vice President could have been more sensitive than to call them "bomb factories." In making reference to the Germans and French, the Vice President was beginning to lay the groundwork for further discussions by making reference to the goals of the nonproliferation treaty. It was that treaty and other attempts at arms control that have since formed the basis of what has been an attempt, albeit difficult, to control the spread of nuclear weapons around the world.

Since the end of World War II, nuclear arms control has revolved around three kinds of negotiations: controls on testing and development of nuclear weapons, such as the Partial Test Ban Treaty; controls on the spread of nuclear weapons to countries that currently do not have them, such as the Nonproliferation Treaty; and ceilings on the numbers of weapons that the two superpowers deploy, such as Salt 1 and Salt II.¹³ Salt 1 was signed on May 26, 1972. President Carter and Leonid Breznev of the Soviet Union signed Salt II in June 1979.

Prior to the signing of the nonproliferation treaty in 1968, a number of crucial events occurred related to the spread of nuclear technology. In December of 1953, President Eisenhower announced at the United Nations, the "Atoms for Peace" program, essentially permitting American corporations to sell reactors and fissile materials abroad. And as part of the plan, in 1957, the United Nations established the International Atomic Energy Agency (IAEA) to account for the flow of fissile material in and out of reactors, in order to make sure that it was not being diverted to make weapons. As might have been expected, by the mid-1960's, most European countries and a surprising number of Third World countries, such as Israel, India, Pakistan, South Africa, Iran and Argentina, were all operating nuclear reactors.¹⁴

When the nonproliferation treaty was signed in 1968, the U.S, the Soviet Union and Great Britain agreed not to transfer technology that would permit the development of nuclear weapons in other countries. The other countries signing the treaty agreed not to develop these weapons. France and China did not sign the agreement; neither DeGaulle nor Mao Tse-Tung wanted to undermine their country's infant nuclear weapons programs.¹⁵

An incident that greatly influenced Carter's stand on nuclear energy occurred early in 1952, when a nuclear reactor at an experimental installation in Chalk River, Canada, suffered a meltdown and some radioactive material escaped into the atmosphere. The Canadian government made an urgent request to the Atomic Energy Commission for assistance in disassembling the damaged nuclear reactor core.

Carter was a member of the team dispatched to the site. A duplicate mock-up of the reactor was constructed on a nearby tennis court, in which the men were able to practice each tedious step of the dismantling process. The intensity of the radiation at the core meant that each man could spend only ninety seconds in the reactor. In teams of three they descended far beneath the ground, where their work was monitored by closed-circuit television. Every time they removed a bolt or fitting, the equivalent piece was removed from the mock-up. Finally, Carter and his two colleagues descended into the reactor and worked furiously but methodically for their allotted time. Eventually the reactor was completely disassembled. The experience made a deep impression on Carter, perhaps more so than he knew at the time.¹⁶

The Economies of Nuclear Reprocessing

On March 15, 1977, Cyrus Vance briefed President Carter on his upcoming meeting with Japanese Ambassador Togo. One of the main topics to be discussed was the U.S. nuclear policy. In particular the Japanese were deeply concerned that emerging U.S. nuclear fuel reprocessing policy, and a possible moratorium on reprocessing, might restrict development of Japan's domestic nuclear energy program. A particularly urgent aspect for Japan was to secure U.S. permission to begin operation of its \$200 million Tokai Mura nuclear power facility, now approaching start-up, which depended on U.S. origin fuel.¹⁷

This memo was the first mention of the Tokai nuclear facility contained in the declassified documents. The Tokai Mura facility is located in Ibaraki prefecture, northeast of the Tokyo or Kanto region.¹⁸ The Japanese administration was under great political pressure at home and abroad to not only continue development of an alternative energy source, but to put the over 200 million dollars of investment to work. They felt it was time to begin "hot testing" and that the U.S. was beginning to contradict itself on its policy with Japan. There were also comments by the Japanese suggesting that they were being treated differently from the Germans or French, both of who already had facilities similar to the Tokai plant. In another briefing dated March 20, 1977, Cyrus Vance prepares the President for upcoming discussions with Prime Minister Fukuda. He begins by saying:

Because of the extreme concern Japan feels for the possible shape of new U.S. policy toward nuclear reprocessing, Fukuda sent a special representative, Ryukishi Imai, to hold discussions with U.S. officials. Imai forcefully argued that the objectives of nonproliferation can be achieved by limiting access to reprocessing to the only four states which can justify a full fuel cycle (U.S., USSR, FRG, Japan); that Japan signed the NPT (nonproliferation treaty) to obtain benefits under Article IV for peaceful development, which the U.S. now seems about to deny; and that Japan had developed its nuclear program, including the Tokai facility, following U.S. guidance and stimulus. Imai

suggested that a sudden change of mind by the U.S. would cause distrust and suspicion.¹⁹

The Tokai Mura issue was beginning to pick up steam and President Carter was due to make his first trip abroad as President to attend an economic summit in the United Kingdom. The Prime Minister of Japan, Takeo Fukuda would be there as would be the heads of state of Canada, France, the Federal Republic of Germany, and Italy. Just what was the Carter administration's policy? It appeared that not everyone in the administration had the same ideas about what it was and were making conflicting policy statements. The Japanese interpreted this as indicating that this issue just wasn't as pressing for the U.S. government as it was for them.

In April 1977, the Carter administration continued to look at how they should approach the issue and assembled a governmental team to explore possible resolutions. In a briefing for the President, Warren Christopher, a member of the Carter team emphasizes that:

The Japanese government faces severe and probably unacceptable embarrassment if the prototype facility cannot be used in some form. The Japanese media and the mass media view this issue as a nationalistic one in which resource-poor Japan is being denied energy self-sufficiency. We have therefore developed an approach which will explore with the GOJ (Government of Japan) the feasibility of operating Tokai on an experimental basis, with a modified process which does not produce separated plutonium.²⁰

In May 1977, a telegram to the U.S. Secretary of State details a conversation, where Prime Minister Fukuda told Carter that resolution of the Tokai Mura issue was critical for him. In conversation, Carter told Fukuda that he would tell the Department of State to re-examine the matter and see to it that the issue would not embarrass Fukuda.²¹ The telegram goes on to say "Fukuda had been most impressed by Carter's statement on Japan at a press conference announcing a new U.S. nuclear policy on April 7, but then had been disturbed by statements made subsequently by lower level officials which contradicted the President's remarks."²² It was beginning to cause friction and even mistrust in the less than five-month old Carter Administration.

In a memo to Zbigniew Brzezinski, dated May 27, 1977, the results of an options paper completed by the State Department were available and were being analyzed by the ACDA (Arms Control and Disarmament Agency.) Among the series of options, the ACDA preferred Option 3 with a few caveats:

ACDA prefers Option 3 with respect to the use of Tokai, but believes that the U.S. should not offer the possibility of the U.S. providing plutonium for the next Japanese breeder reactor (the "Monju"), nor should the U.S. agree to permit U.S.-origin fuel to be reprocessed for that purpose. We have calculated that the British-supplied "Magnox" reactor at Tokai can provide sufficient plutonium to meet this Japanese breeder need. Since we have no say over the disposition of spent fuel from that reactor, the Japanese could send the fuel to the UK for reprocessing.²³

What did this mean politically for the Carter Administration? The memo goes on to detail additional reasons why this would be the best option, specifically stating that this option would thereby:

- Avoid the appearance of the U.S. actively supporting foreign plutonium breeder work
- Avoid the transfer of Japanese fuel of U.S. origin for reprocessing
- Circumvent the need to make an advanced commitment on light-water reprocessing at Windscale (which is already functioning for Magnox fuel but not light water fuel)
- Treating the Japanese the same as the Germans, in that both are having fuel reprocessed over which we have no control.²⁴

Weren't the Japanese already being treated the same as the Europeans or did the Government of Japan have a real gripe with the Carter Administration?

Pressure to Reach a Compromise

In late July and August of 1977, the number of communications dealing with the Tokai issue increased dramatically and pressure began to build for both the Carter Administration and the Government of Japan to come up with a negotiated compromise. It was evident by these documents that if things weren't done quickly, the relationship between the two administrations would quickly

sour, more so than it appeared in the public eye. On July 12, 1977, a telegram from Ambassador Mansfield begins with the subject line, "The Reprocessing issue and future U.S. - Japan relations."²⁵

Appointing Mansfield as Ambassador to Japan was a good move for the Carter Administration as evidenced by this emphatic telegram only a few weeks into his ambassadorship. It was clear by the tone of the message that the issue was indeed one that threatened the relationship. Mansfield goes on to say that high-level Japanese officials claim that the U.S. does not understand Japan's extraordinary energy predicament nor its commitment to solely peaceful uses of nuclear energy. Finally, in bullet item 6, he says "the repercussions will be long lasting, severe, and widespread...to procrastinate longer will act to harden each side's position."²⁶

Many of the secret documents contained notes and scribbled items from a number of people, but Carter often wrote long notes as shown below from the Mansfield memo. In a note dated July 12, 1977, Carter says that he will personally expedite the compromise decision. "Inform Mansfield that I will personally expedite the compromise decision. He can tell Fukuda. Give me options without delay."²⁷

Just what was at stake over what Prime Minister Fukuda publicly called, "a life and death issue for Japan"? From a Japanese standpoint, they viewed nuclear energy as indispensable to the future of Japan, vital to the development of Japan's economy as a whole.²⁸ The U.S. standpoint tried to balance its nonproliferation concerns and insure that pending non-proliferation legislation would not be impacted by a Tokai decision. They also hoped to use this to rationalize reprocessing facilities for similar purposes in other countries.²⁹ One of the biggest risks was whether or not this type of facility could produce weapons-grade material that could be separated out as plutonium and ultimately be used in a nuclear weapon.

In a memo to the President on August 13, Brzezinski puts the Tokai issue rather simply:

"Tokai is bound to appear as an exception to our general standpoint against reprocessing. The key issue is thus how an exception can be made with as little damage as possible to our non-proliferation objectives. None of the technical options is very good from the standpoint of those objectives; the best -- coprocessing -- pushes the Japanese in a direction not regarded as promising on non-proliferation grounds. Limiting damage to non-proliferation objectives will depend on what political measures accompany any technical solutions."³⁰

As pointed out by the Nuclear Regulatory Commission in a memo dated August 3, 1977, "Whatever nonproliferation advantages would be obtained from coprocessing of blending in terms of national diversion would depend on whether there was a facility capable of separating the plutonium. (In fact, given such a facility, the plutonium may be separated out, possibly in a matter of days without much difficulty.)"³¹ And therein lies the biggest risk of all, being able to produce separated plutonium. Another issue was of course financial, if modifications were to be made to the Tokai facility because of a policy change, who would pay for the changes?

As the end of August approached, both administrations began to negotiate a compromise agreement that would satisfy both governments and allow the facility to begin operation, at least in part with out much delay. The conversion of part of Tokai to a coprocessing facility, one that would not be capable of producing pure plutonium would satisfy the U.S. nonproliferation objectives.

But would that be acceptable to the Japanese? In a series of memos detailing the final negotiations, it appeared that the Japanese were willing to offer to delay construction of a plutonium conversion plant. The plant was one of the most critical items in the entire Japanese program for the utilization of plutonium in advanced reactors. Without the conversion plant, the plutonium produced at Tokai could not be used as reactor fuel.³²

Finally, on August 31, 1977, a secret memo from Brzezinski to the President outlined his and the negotiating teams final recommendations, supported by ACDA to accept an agreement that:

In essence, the Japanese (1) want to defer decision on coprocessing for two years, subject to R & D and INFCEP; (2) recognize that U.S. originated fuel will not be available beyond the two-year period unless they accept coprocessing; and (3) are willing to impose a voluntary deferment on the construction of their proposed plutonium conversion plant, despite their financial commitments to proceed.³³

Conclusion

In the end, the Tokai Mura issue was resolved. Through careful negotiations, the U.S. was able to negotiate a number of concessions that appealed to both sides to ensure a good relationship that continued throughout the Carter Administration. The U.S. eventually agreed to permit the startup, or “hot testing” of the new facility using U.S.-origin fuel for a period of two years until 1979, satisfying Japan’s need for the continued development and testing of nuclear energy as a viable alternative energy source for the entire country.

Ironically though, while President Carter and his top officials honed in on issues like nuclear proliferation and weapons grade plutonium, they neglected the issue of nuclear safety. Even more paradoxically, the accident at Three Mile Island had occurred during Carter’s Administration. The accident and the subsequent leakage of radioactive material was almost a total meltdown. It happened in the middle of the Iranian revolution, a revolution that interrupted the world’s oil supply and helped cause the energy crisis in 1979. Soon after that accident, Carter personally visited the accident site to assure the American people that nuclear safety was foremost in his thinking.

Tragically and coincidentally, an accident at the Tokai facility occurred on September 30, 1999. In that accident, the worst one in the history of the Japanese nuclear industry, three workers received high doses of radiation in a Japanese plant preparing fuel for an experimental reactor. Bringing together too much uranium enriched to a relatively high level, what is called a “criticality” to occur, caused the accident.³⁴ It is likely that more people were affected by the accident; the

“official” estimates downplay the final degree of radiation and subsequent contamination that was released. This was perhaps what the Carter Administration was ultimately trying to prevent.

As one of the most active ex-presidents in history, Jimmy Carter has remained active in nuclear issues. He almost single-handedly negotiated an agreement with North Korea in 1994 (much to the dismay of the Clinton Administration) to halt any nuclear weapons research. His efforts may have helped to avert war during that period, however much of that eventual agreement has unraveled in 2003. Human rights were a constant theme in his presidency and he was awarded the Nobel Peace prize on October 11, 2002 for his untiring commitment to human rights and peace in the world today.

Those who fail to examine history are doomed to repeat it. It appears to some extent that this is what the United States has done in the current North Korean crisis. Just as Jimmy Carter was accepting his well-deserved Nobel Peace Prize in October of 2002, the North Korean nuclear crisis began to escalate. In a time when the public's attention is riveted by almost daily acts of terrorism around the world, the looming threat of nuclear arms proliferation often slips into the background. Yet this issue is often cited as an even greater threat to national and global security than terrorism.

As we have witnessed first-hand in recent months, countries like North Korea may have in fact obtained the means to make a nuclear weapon, if they have not created one already. In retrospect, it appears that the Carter Administration had good reason to be careful in their negotiations on any issue that could impact nonproliferation. The declassified documents did indeed show that the Tokai Mura debate greatly impacted the U.S.–Japan relations. In the end though, the issue strengthened the relations for the remainder of Carter’s term.

¹ NLC-98-273, Declassified documents. Document dated, August 13, 1977. Declassified on May 28, 1999.

² NLC-98-273, (May 28, 1999).

³ The original idea for this paper began in the summer of 2002 after a visit to the Carter Library in Atlanta, Georgia, by Professor Uldis Kruze of the University of San Francisco. While consulting with an archivist there, he performed a search of recently declassified documents relating to Japan during the Carter Administration. Further research by myself (Charles S. Costello III), a graduate student in the MAPS program at the USF Center for the Pacific Rim revealed that the initial search turned out to be only one-quarter of the declassified material relating to Japan. The total number of declassified materials approached 1800 pages. After comparing the new, much larger list with Professor Kruze and the original list of declassified documents, 400 of the earlier documents were ordered and are what this paper is based on. I owe Professor Uldis Kruze a lot of thanks for allowing me to take the research and the paper in the direction of the Tokai issue. Although the declassified documents contained all sorts of information., the Tokai issue was one that couldn't go unnoticed.

⁴ Bourne, Peter G., 1997. *Jimmy Carter: A comprehensive biography from Plains to Post Presidency*. New York, NY. Simon and Schuster. p. 392.

⁵ Bourne, (1997) p. 240.

⁶ Bourne, (1997) p. 266.

⁷ Bourne, (1977) p. 268.

⁸ Brzezinski, (1983) p. 289.

⁹ Brzezinski, (1983) p. 557.

¹⁰ NLC-96-182, Declassified 1/16/98. Memorandum of conversations dated January 31, 1977, from the Prime Minister Takeo Fukuda's office, Tokyo, Japan.

¹¹ NLC-96-182, (February 1, 1977) p. 1.

¹² NLC-96-182, (February 1, 1977) p. 3.

¹³ Berkowitz, Bruce D., *Calculated Risks, A century of arms control, why it has failed, and how it can be made to work*. Simon and Schuster, 1987. p. 18-19.

¹⁴ Berkowitz, (1987) p. 173-174.

¹⁵ Berkowitz, (1987) p. 174.

¹⁶ Bourne, (1997) p. 74-75.

¹⁷ NLC-98-266, Declassified 5/24/99. Briefing from Cyrus Vance dated March 15, 1977, on the Presidents upcoming meeting on March 16 with Ambassador Togo.

¹⁸ “A profile of Ibaraki,” http://www.pref.ibaraki.jp/bukyoku/seikan/kokuko/en/profile/pro_02.htm.

¹⁹ NLC-98-266, Declassified 5/24/99. Briefing from Cyrus Vance dated March 15, 1977 concerning the President discussions with Fukuda on Nuclear Reprocessing.

²⁰ NLC-98-266, Declassified May 21, 1999. Memo dated April 2, 1977, from Warren Christopher about Nuclear reprocessing questions with Japan.

²¹ NLC-98-269, Declassified May 25, 1999. Telegram dated May 1977, incoming telegram to the Secretary of State.

²² NLC-98-269, (May, 27, 1977) p. 2.

²³ NLC-98-271, Declassified February 16, 1999. Memo dated May 27, 1977, from the United States Arms Control and Disarmament Agency.

²⁴ NLC-98-271, (May 27, 1977) p. 1.

²⁵ NLC-98-269, Declassified May 25, 1999. Telegram dated July 12, 1977, from Ambassador Mansfield to Secretary Vance.

²⁶ NLC-98-269, (July 12, 1977) p. 3-4.

²⁷ NLC-98-269, (July 12, 1977) p. 1. The secret documents containing this note and others have been included at the end of the paper, as an addendum. They provide a sample of the actual declassified documents that form the basis of this paper.

²⁸ NLC-98-273, Declassified 6/4/99. Telegram dated August 26, 1977, from Prime Minister Fukuda to President Carter.

²⁹ NLC-98-275, Declassified 2/10/99. Memo dated August 2, 1977, to Zbigniew Brzezinski concerning Tokai plant options paper.

³⁰ NLC-98-273, Declassified 6/4/99. Memo dated August 13, 1977, from Zbigniew Brzezinski to The President.

³¹ NLC-98-276, Declassified 2/20/99. Memo dated August 3, 1977, to Zbigniew Brzezinski from the Nuclear Regulatory Commission.

³² NLC-98-274, Declassified 5/25/99. Telegram dated August 31, 1977, to Brzezinski from the Gerard Smith and Mansfield in Tokyo.

³³ NLC-98-273, Declassified 6/4/99. Memo dated August 31, 1977, to The President, from the Zbigniew Brzezinski.

³⁴ <http://www.uic.com.au/nip52.htm>, Tokaimura criticality accident. Nuclear Issues Briefing Paper # 52, June 2000.