Japan Plutonium Overhang Origins and Dangers Debated by U.S. Officials

Proliferation Risks of Japanese Plutonium Surpluses Troubled U.S. Officials
Origins, Dangers of Japan’s Excess Supply Dates Back Decades, Forward to 2018
Controversy Continues Today Over Whether Reprocessing by Japan Should Continue
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Ambassador Gerard C. Smith, responsible for nonproliferation policy during the Carter administration, meeting with President Jimmy Carter, 24 October 1979. Concerned about U.S.-Japan diplomatic relations, Smith wanted Japan to have more leeway in reprocessing spent nuclear reactor fuel so that it could develop fast breeder reactors, although some worried that that would lead to mounting plutonium surpluses (Photo courtesy of Jimmy Carter Presidential Library)

Washington, D.C., June 8, 2017 – Japan’s long-standing aspirations to develop a «plutonium economy» troubled U.S. officials going back decades as early as the Jimmy Carter administration, according to documents posted today by the nongovernmental National Security Archive at The George Washington University and the Nuclear Nonproliferation International History Project at the Woodrow Wilson International Center for Scholars.

The Japanese government appealed repeatedly in the late 1970s for authority to utilize American spent fuel for reactor experiments and for acceptance of the country’s right to resource self-sufficiency. Tokyo’s position sparked intense debate within the Carter administration, between those who wanted to avoid damaging ties with Japan and those – including the president – who placed a high priority on curbing the availability of
sensitive nuclear technologies. Among the newly declassified documents in this e-book is a National Security Council memo expressing concern that the inevitable surplus from Japan’s desired processing plans would “more than swamp” global requirements and create a significant proliferation risk involving tons of excess plutonium by the year 2000. Indeed, as a result of reprocessing activities since then, Japan possesses 48 tons of plutonium and could be producing more, with no clearly defined use, when a new reprocessing facility goes on line in 2018, unless Washington and Tokyo renegotiate a nuclear agreement that expires that same year.

Today’s posting is part of a growing body of records being compiled by the National Security Archive’s Nuclear Vault that flesh out largely unknown aspects of the history of Japan’s nuclear program, and more generally the inherent dangers of proliferation of nuclear materials.

Japan’s Plutonium Overhang: Debates During the Carter Administration
By William Burr

Plutonium, a key element of nuclear weapons, has been an issue in U.S.-Japan relations for decades. During the administration of Jimmy Carter, the Japanese government pressed Washington for permission to process spent reactor fuel of U.S. origin so that the resulting plutonium could be used for experiments with fast breeder nuclear reactors. The government of Japan wanted to develop a “plutonium economy,” but U.S. government officials worried about the consequences of building plants to reprocess reactor fuel. According to a memo by National Security Council staffer Gerald Oplinger, published for the first time by the National Security Archive, the “projected plants would more than swamp the projected plutonium needs of all the breeder R&D programs in the world.” They “will produce a vast surplus of pure, weapons grade plutonium amounting to several hundred tons by the year 2000.” That stockpile “would constitute a danger in itself” and “it would eventually drive these nations, and those watching their example, into the recycle of plutonium in today’s generation of reactors for economic reasons,” which the Carter White House saw as a waste of resources.

That the White House leaned against reprocessing spent nuclear reactor fuel frustrated the government of Japan, which saw (and still does) its energy future in using plutonium to fuel advanced reactors. By 1979, Gerard C. Smith, the president’s representative on nonproliferation policy, wanted Japan to be given leeway so it could reprocess without getting U.S. consent. Worried that Japan and other close allies perceived the United States as an “unreliable” nuclear supplier, Smith hoped to avoid “major damage” to the relationship with Tokyo. His initiative touched off debate within the Carter administration, evidence of which is published today by the National Security Archive.
The first Japanese reprocessing plant at Tokai Mura, which went on-line in January 1981 several years after it was the subject of a U.S.-Japan controversy over nuclear reprocessing policy (Photo taken in 1999, courtesy of Greenpeace)

Today’s posting demonstrates how the Carter White House’s critical approach to plutonium reprocessing came under fire from within and outside the administration. Among the documents published are:

The record of a conversation between Smith and Minister of State for Science and Technology Iwazo Kaneko, who gave a fervent defense of a plutonium economy: given Japan’s energy needs, it was “essential … to make maximum use of plutonium, particularly in fast breeder” While Japan had to take nonproliferation concerns into account at the same time it had “the right to use nuclear energy for peaceful purposes.”

A memorandum by Assistant Secretary of State Richard Holbrooke supporting Smith’s position, arguing that a failure to change the U.S. approach to Japanese reprocessing “would suggest … that we are insensitive to their most basic security and economic requirement” and could “also open a fissure in our relationship with the most profound consequences for US interests.”

Memoranda by top advisers to Secretary of State Edmund Muskie, Leon Billings and Berl Bernhard, who raised questions about Gerard Smith’s motives. Billings advised Muskie to take into account “the bias of State Department negotiators,” especially Smith’s background as a “life-long nuclear power advocate” who sees “current resistance [to nuclear power] in this country as something which should be overcome.”

A critique of Smith’s proposal by Policy Planning Staff official Robert Gallucci, who argued that it was a mistake to assume that a move toward plutonium breeder reactors was inevitable.

“There is still no accepted way to have breeders without having fuel loadings which would each contain enough plutonium to fabricate hundreds of nuclear weapons.”
A report by the U.S. Embassy in Tokyo on a report by the Japanese Atomic Energy Research Institute, which concluded that Japan did not need the second reprocessing plant. According to White House commentary on the report, it was “something of a bombshell” by providing “confirmation we have yet seen of the basic premises underlying the President’s 1977 policies: that the need for large scale reprocessing and commercial use of plutonium remains distant and uncertain.”

The risk of nuclear proliferation was a significant element in Jimmy Carter’s presidential campaign, which raised questions about the hazards of nuclear energy and attacked the Ford administration for ignoring the “deadly threat posed by plutonium in the hands of terrorists.” Not long after his inauguration, Carter signed Presidential Directive 8, which declared that “U.S. non-proliferation policy shall be directed at preventing the development and use of sensitive nuclear power technologies which involve direct access to plutonium, highly enriched uranium, or other weapons useable material in non-nuclear weapons states, and at minimizing the global accumulation of these materials.” Consistent with this, Carter called for an indefinite deferral of commercial reprocessing and the recycle of plutonium in the U.S. and restructuring U.S. breeder reactor programs to develop “alternative designs to the plutonium breeder.” He also directed U.S. nuclear R&D spending to focus on the “development of alternative nuclear fuel cycles which do not involve access to weapons useable materials.” [i]
Secretary of State Edmund Muskie, who presided over the latest U.S. government internal debate over reprocessing policy during the summer of 1980. Photograph taken during State Department farewell event at the end of the Carter administration (U.S. National Archives, Still Pictures Unit, RG 59-SE, box 8)

To develop an international consensus on those ideas, Carter called for an International Nuclear Fuel Cycle Evaluation (INFCE) program, which partly aimed at promoting “alternative, non-sensitive, nuclear fuel cycles.” That goal and the critical approach toward reprocessing were complex diplomatically because, as noted, key allies such as Japan were committed to the goal of a “plutonium economy.” The 1974 Indian nuclear test had made Washington more sensitive to the proliferation risk of reprocessing, which dismayed the Japanese because Washington had formerly encouraged reprocessing. At Tokai Mura village, Tokyo was completing a facility that it would use for reprocessing U.S.-supplied reactor fuel. An earlier nuclear energy agreement with Japan provided the Carter White House with leverage over Japan’s reprocessing plans; nevertheless, Carter recognized that Washington could not “impose [its] will.” He avoided diplomatic tensions by approving a compromise permitting reprocessing at Tokai Mura village. The Japanese planned on going further by building a large plant for commercial reprocessing.

The compromise on Tokai Mura notwithstanding, Carter’s nonproliferation policy continued to rankle Tokyo, especially with the passage of the Nuclear Nonproliferation Act (1978). Criticizing the NNPA, Ryukichi Imai, a leading figure in the Japanese nuclear industry [See Document 4], said that “The United States no longer can impose upon the world its version of truth, but, by attempting to do so, it can cause enormous disturbances.” The Act called for the renegotiation of earlier bilateral nuclear energy agreements, but what especially bothered Tokyo was that it prohibited reprocessing of U.S. supplied fuel without U.S. approval. That strengthened the so-called “MB [Material Balance]-10” procedure that Washington had been following for years with respect to Japanese shipments of spent fuel for reprocessing in France and the United Kingdom. It was this procedure that Gerard Smith wanted so that Japan would not have to ask for permission routinely.[iii]

An important theme of early Carter administration diplomacy, one that was central to Smith’s thinking, was “trilateralism.” Smith was, with Zbigniew Brzezinski and David Rockefeller, one of the founding fathers of the Trilateral Commission, formed in the early 1970s in order to enhance U.S. relations with Japan and the European Community. Like his colleagues, Smith worried about the impact of the 1971 “Nixon shocks” on Japan and Western Europe and sought to strengthen post-World War II multilateralism to prevent the kind of political and economic rivalries that had destabilized international relations during the 1930s. Trilateralists also worried about divisions that could weaken the West in the face of Soviet and Third World challenges. For the Carter administration, these goals proved difficult in practice and relations with trans-Atlantic and trans-Pacific allies were rocky.[iii] Nevertheless, the trilateral frame of mind made Smith sensitive to the concerns of Washington’s Japanese and Western European partners about nuclear energy
issues, believing that failure to take a sympathetic approach could have an adverse diplomatic impact.

The international fuel cycle conference that Carter sought led to a number of international meetings during 1978 and 1979, but it did not arrive at the alternatives to reprocessing plutonium that the White House had sought. Owing to divisions among the nuclear states and developing countries seeking broad scope in developing fuel cycles, the INFCE did not rank the various nuclear fuel cycles according to the proliferation risk that they posed; nor did it find any technical means to eliminate or reduce the proliferation risks involved in reprocessing. Nor did it produce an across-the-board acceptance of the U.S. view that thermal recycling (the use of plutonium as reactor fuel) was economically disadvantageous. Moreover, some countries, such as Japan and France wanted the U.S. to make decisions that had been deferred while the INFCE was conferred, such as on the reprocessing of U.S.-origin fuel.[iv]

Catching up with the deferred decisions, among other issues, gave Smith an opportunity to suggest policy changes aimed at mitigating Japanese and Western European concerns. During the summer of 1980, with Carter’s approval, Smith held discussions with Japanese and West European nuclear energy officials, but the administration’s defeat in November meant that his agenda could not produce any results. Nevertheless, what Smith sought foreshadowed developments during the Reagan administration, which in 1987 reached an agreement, approved by Congress the next year, that gave Japan “comprehensive advanced consent” to reprocess. Tokyo could go forward with plans, still unrealized, to develop breeder reactors fueled with plutonium. CAC was an important concession and was controversial in the United States owing to concerns about political and environmental hazards of plutonium storage and transport. The internal Reagan administration record of the negotiations with Japan remains classified but is the subject of ongoing declassification requesting by the National Security Archive.

The controversial Japanese reprocessing facility at Rokkasho, scheduled to go on-line in 2018. If it goes into production, its will be producing reactor-grade plutonium that has no programmed use.
Since the 1988 agreement Japan’s nuclear plans have gone awry. The Fukushima disaster raised questions about nuclear energy as a power source while the Monju fast breeder reactor turned out to be a tremendously expensive boondoggle, which the Japanese government decided to decommission in late 2016 (during more than 20 years it operated only 250 days). The government remains interested in developing plutonium-fueled fast reactors but that is a remote prospect.

Plans to use plutonium in a mixed oxide (MOX) reactor fuel have come to naught. At present, therefore, Japan has no clearly defined use for the 48 tons of separated plutonium that it owns, some 11 tons of which are on Japanese territory. The surpluses, which emerged as anticipated, continue to worry arms control experts, including some, such as Robert Gallucci, who were involved in the 1980 debate. Terrorists would need only a few kilograms of plutonium for a weapon with mass destruction potential. In the meantime, the Rokkasho reprocessing facility is scheduled to go on-line in 2018. The industrial scale facility is slated to separate 8 tons of plutonium maximum annually, although Japan has no specific plans for using most of it. 2018 is the same year that the 1988 U.S.-Japan agreement is slated to expire, although whether the Trump administration has any interest in renegotiating it remains to be seen. Meanwhile, the South Korean government, which cannot reprocess, under existing agreements with Washington, asks why it cannot do what Japan has been doing.

When NSC staffer Gerald Oplinger wrote that the plutonium surplus would constitute a “danger in itself,” he probably assumed an environmental hazard and possibly a proliferation risk and vulnerability to terrorism. He did not mention the latter risks, although the reference to surpluses of “weapons grade” material evoked such concerns. While Japanese reprocessing plants would be producing reactor-grade plutonium, it nevertheless has significant weapons potential. On the question of Japan’s nuclear intentions, the documents from this period that have been seen by the editor are silent; it is not clear whether U.S. officials wondered whether elements of the government of Japan had a weapons option in the back of their mind. Any such U.S. speculation, however, would have had to take into account strong Japanese anti-nuclear sentiment, rooted in terrible historical experience, Japan’s membership in good standing in the nonproliferation community, and that since the days of Prime Minister Sato, the “three Nos” have been official national policy: no possession, no manufacture, and no allowing nuclear weapons on Japanese territory. According to a 1974 national intelligence estimate, Japan was keeping “open” the possibility of a weapons capability and had the resources to produce weapons in a few years, but the intelligence agencies were divided over the likelihood of such a development. The CIA, State Department intelligence, and Army intelligence saw such a course of action as highly unlikely without a collapse of U.S. security guarantees and the emergence of a significant threat to Japan’s security.

Sources for this posting including State Department FOIA releases as well as recently declassified records at the National Archives, including the records of Gerard C. Smith and
Secretary of State Edmund Muskie. Many documents on Japan from the Smith files are awaiting declassification review.

READ THE DOCUMENTS

Document Document 01

Louis Nozenzo, Bureau of Political-Military Affairs, Department of State, to Joseph Nye et al., enclosing paper on "U.S. Policy on Foreign Reprocessing," 24 January 1977, Confidential

Source: State Department Freedom of Information Act (FOIA) release

Even before President Carter came to office, the outgoing Ford administration had been sending strong signals that the United States was no longer taking a business-as-usual approach to plutonium. The Carter White House was about to take an even tougher angle: a "go-slow attitude ... toward a reprocessing/plutonium economy and a desire to have other industrialized economies follow a similar course." For government policy experts, nuclear operations that produced plutonium as a byproduct were not inherently "safeguardable" and the danger was "withdrawal from or abrogation of safeguards agreements and political commitments and also terrorist action which no system of technical safeguards can prevent." Thus, proposals to stockpile plutonium as fuel for experimental breeder reactors were inconsistent with nonproliferation and safety objectives. Questioning economic, environmental, and other arguments that had been used to justify reprocessing, Nozenzo, like others in the administration, supported an international evaluation program to determine its worth.

Noting Japan's intent to begin operations at the Tokai Mura reprocessing plant, Nozenzo recommended a joint U.S.-Japanese test program for the application of new ground rules, for example, by assuring U.S. custody of "strategic quantities" of plutonium. As for Japanese plans for a larger scale commercial reprocessing plant, Washington needs to "convince them to delay those plans pending the results of the U.S. evaluation program."

Document Document 02

Patsy Mink, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs, to Deputy Secretary of State, "PRC Meeting on PRM-15 Response," 15 March 1977, Confidential

Source: State Department FOIA release
A Presidential Review Memorandum
https://history.state.gov/historicaldocuments/frus1977-80v26/d317 requested agency
views on a number of proliferation matters. A report
https://history.state.gov/historicaldocuments/frus1977-80v26/d325 had been drawn up
but the issues were still under consideration. With respect to processing, the State
Department and other agencies agreed on the need for a "fuel cycle evaluation program
to investigate ways of avoiding or minimizing the problems associated with the presence
of separated plutonium." With respect to reprocessing in the United Stat
the State
Department believed "that our domestic program, more than any other element, will
convey a signal to other countries concerning our intent to avoid or proceed with
reprocessing, that there is no economic need for the US to proceed now."

Document Document 03

Patsy Mink, Assistant Secretary of State for Oceans and International Environmental and
Scientific Affairs, to Deputy Secretary of State, "State Department Views on the Partial
Response to PD-8," 5 April 1977, with attached memorandum from Warren Christopher
to President Carter, "Nuclear Reprocessing Discussions with Japan" attached, Secret

Source: State Department mandatory declassification review (MDR) release

Following up the responses to PRM-15 with a directive, PD-8
https://history.state.gov/historicaldocuments/frus1977-80v26/d330

President Carter instructed the agencies to "seek a pause among all nations in sensitive
nuclear developments in order to initiate and actively participate in, an intensive
international nuclear fuel cycle re-evaluation program (IFCEP) whose technical aspects
shall concern the development and promotion of alternative, non-sensitive, nuclear fuel
cycles. This program will include both nuclear supplier and recipient nations." As part of
the pause, the United States Government would "indefinitely defer the commercial
reprocessing and recycle of plutonium in the U.S."

Recognizing that a number of close allies, including France, West Germany, and Japan,
had a strong interest in reprocessing, State Department officials believed that
Washington "must take account of these concerns while moving toward our objectives of
finding alternatives to a plutonium economy and minimizing the global accumulation of
weapons usable material." On Japan, Deputy Secretary of State Warren Christopher
observed that "Right wing elements in the Liberal Democratic Party (LDP) and
conservative business groups in Japan are strident on" the Tokai Mura reprocessing plant
and that Japanese public opinion saw U.S. opposition as a denial of energy self-sufficiency
to "resource-poor Japan." Therefore, Washington needed "to proceed in a manner which
will not seem to present the Japanese with a fait accompli or foreclose possibilities for further discussion."

Memorandum of conversation, "Non-Proliferation and Reprocessing in Japan," 14 April 1977, Confidential, with "Possible Basis of Japan-US Understanding of Nuclear Fuel Cycle", 15 April 1977, attached

Source: U.S. National Archives, Record Group 59, Department of State Records [RG 59]. Subject Files of Ambassador at Large and Representative of the United States to the International Atomic Energy Agency, Gerard C. Smith [Smith records], box 17, Tokai Mura Agreement 9/12/1977

During this discussion, Ryukichi Imai, a senior official with Japan Atomic Power Company and an adviser to the Foreign Ministry (and later career ambassador and academic), laid out Japan's basic nuclear energy objectives. Acknowledging that "in the present situation [plutonium] is not an economic fuel" and that the "near-term commercialization of plutonium technology is neither possible nor necessary," nevertheless, he wanted the U.S. to recognize that "plutonium technology remains important." Moreover, "its extraction, handling and burning should be the continued subject of Japanese research and development activities." Such activity should be limited to the US, the Soviet Union, the European Community, and Japan.

The Japanese perspective worried U.S. officials, not only for its "frankly discriminatory" approach, but also because of its inconsistency with U.S. policy, which was to "take every reasonable step to avoid setting a precedent for the reprocessing of spent fuel for recycle purposes." To reconcile the differences, the discussants agreed to underscore U.S.-Japanese cooperation so as not to prejudice President Carter's nonproliferation policy and [set] "unfavorable precedents." Moreover, they agreed it was important to address Japan's domestic political problems and energy needs and to "explore means ... to make the Tokai facility an effective and constructive element in an international nuclear fuel cycle evaluation."

Memorandum from Ambassador-at-Large and Special Representative for Non-Proliferation Matters Gerard C. Smith, Assistant Secretary of State for East Asian and Pacific Affairs Richard Holbrooke, and Deputy Under Secretary of State for Security Assistance, Science, and Technology Joseph Nye to the Secretary of State, "Options Paper
With Japanese Prime Minister Fukuda seeing Japan's nuclear energy goals as "life and death" matters, President Carter agreed to a compromise on starting up the Tokai Mura reprocessing plant without backtracking on his objective of avoiding hasty reprocessing and plutonium stockpiling. When negotiations began during the summer of 1977, State Department officials developed three options. One was the experimental operation of the plant as a "test-bed" for an IAEA safeguards program. The second was reprocessing with a limited amount of irradiated fuel, with Japanese agreement to begin a major experiment in "co-processing," a blend of plutonium and uranium that could be used to operate light water reactors, but not to fuel a weapon. The third option required the modification of Tokai so that it could "perform only experimental work on coprocessing." While the Japanese disliked that option because it meant a delayed a start-up for Tokai Mura, Carter had suggested it because it would avoid the further spread of reprocessing.

The State Department recommended option 2 precisely because it would enable the Japanese to begin reprocessing while requiring them to experiment with an alternative. Carter approved that option and Smith, recently appointed as the administration's nonproliferation ambassador-at large, went to Tokyo to negotiate the final agreement.

During the negotiations over option 2, the Japanese sought a U.S. concession: they wanted to postpone a decision for two years on co-processing, depending on the success of research and development and the International Nuclear Fuel Cycle Evaluation. Constraining the Japanese decision was that spent fuel of U.S. origin would not be available for reprocessing after two years unless the Japanese accepted co-processing. In exchange for the U.S. concession, the Japanese offered to delay construction of a plant for converting plutonium nitrate into solid plutonium oxide, for which they had already paid a West German firm five million dollars of a 15 million total. If the Japanese built the plant as designed they would have been unable to produce mixed oxide. As Smith explained, that "could have been construed as meaning that the Japanese had no intention of going to the co-processing mode at the end of the two years of operation of
the reprocessing plant."

According to Smith, the concession was significant because it demonstrated that the Japanese were willing to "sacrifice their prior investment .... to wait for R&D and INFCE results on co-processing." It also showed that the Japanese were "willing to delay the achievement of their own internal capability to produce plutonium fuels of any kind for about two years." The concession, Smith believed, would be "highly unpopular" with the company that was building the Tokai Mura plant.

The Japanese also agreed to the "postponement of any major moves toward a follow-on 1500- ton reprocessing plant during [the] INFCE." From the U.S. perspective, the results of the evaluation could persuade the Japanese to rethink the plans for a second plant.

**Document Document 07**

Letter, Ambassador Michael Mansfield to Gerard C. Smith, 14 November 1978, Confidential

Source: Smith records, box 6, Ambassadorial Letters

Responding to Smith's request for an assessment of Japanese nonproliferation policy, Mansfield discussed the undercurrent of Japanese skepticism about Carter's nuclear policy. While the Tokai Mura agreement had improved the atmosphere, the 1978 Nuclear Nonproliferation Act created new difficulties, such as the need for U.S. approval for spent fuel shipments to the UK and France for reprocessing. Tacitly referring to the so-called MB-10 procedure, Mansfield noted that under the law, the Japanese "will have to repeat the rather embarrassing process of seeking U.S. approval each time." Plutonium was also worrisome: "Should the time come when the Japanese need the plutonium they own in Europe for their fast breeder program but are not permitted by the U.S. to receive it, we are going to become engaged in another major confrontation."

The Japanese shared Western European skepticism about U.S policy on such issues as reprocessing of plutonium and Japan was unlikely to "go so far toward meeting U.S. nonproliferation concerns that it will isolate itself from the European consensus position." It was likely to go along with Western European opinion "so that it is not placed at a disadvantage in economic or strategic terms vis-a-vis energy developments."
The bilateral discussions covered an understanding to extend the Tokai Mura agreement to April 1980 and discussion of a still-born plan to use a Pacific island (Palmyra, south of Hawaii) as a storage site for spent reactor fuel. While Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs Thomas Pickering explained U.S. interest in an international nuclear regime that minimized use of plutonium as a reactor fuel, Japanese Atomic Energy Commissioner Kinya Niizeki restated Japan's commitment to an "early PU economy while recognizing [that] nonproliferation problems entailed." To underline U.S. concerns about plutonium, Pickering pulled out charts showing that as Japan reprocessed spent fuel it would generate more plutonium than it would need, even if there was a Pacific basin storage site available. Also taking part in the conversation was Atsuhiko Yatabe, Director-General for Scientific and Technological Affairs, at the Ministry of Foreign Affairs.

Kaneko began with a fervent defense of a plutonium economy: given Japan's energy needs it was "essential ... to make maximum use of plutonium, particularly in fast breeder reactors." While Japan had to take nonproliferation concerns into account but at the same time it had "the right to use nuclear energy for peaceful purposes." Both reprocessing and plutonium use were "compatible" with the peaceful use of nuclear energy. The Minister also discussed the extension of the Tokai Mura agreement, recent changes in Japanese regulations allowing private industry to build a second reprocessing facility, and U.S. approvals of Japanese transfer of spent reactor fuel overseas under the so-called MB-10 arrangements. On the transfers, Kaneko hoped that Washington would show "greater understanding" of Japanese needs, suggesting reservations about the current case-by-case approach. On the second reprocessing facility, both Kaneko and Smith agreed that the regulatory change was not a "major move" toward building the plant.

Smith did not directly address Kaneko's point about plutonium, only allowing that the use of nuclear power for electricity production was wholly compatible with nuclear
nonproliferation. On the MB-10s, Smith understood that the Japanese wanted to go beyond case-by-case and adopt an approval process that was more "suitable to an industrial operation."

**Document Document 10**

Memorandum to the Files by Gary R. Bray, ACDA/NP/NE [Bureau of Nonproliferation and Regional Arms Control, Nuclear Energy Division], "Japanese Plutonium Supply and Demand Update," 11 October 1979, unclassified

Source: Smith records, box 17, Japan June-Dec 1979

In the cover memo to his paper on plutonium supply and demand, Bray wrote that "Japan will have more than enough plutonium to conduct its FBR [fast breeder reactor] and ATR [advanced thermal reactor] programs presently planned for the 1980's and will in fact have an excess of plutonium by 1990." According to Bray, he based that conclusion on the assumption that Japan's programs for plutonium use will meet "their respective schedules, goals and objectives both in the area of supply and demand." That included plans to deploy another liquid fast metal breeder reactor [LFMBR], whose operations would consume and produce plutonium. Bray acknowledged, however, that different scenarios could develop, for example, a plutonium shortage if reactors did not produce enough plutonium for the ATR and FBR, or the failure of those programs and resulting plutonium surpluses. He mentioned that his report did not take into account the introduction of a second reprocessing facility, which could produce large quantities of plutonium "with no stated end use."

**Document Document 11**

Memorandum by "CUD" [Presently unidentified], "Observations on Our Differences with the West Europeans Over Non-Proliferation," 3 November 1979

Source: Smith records, box 6, Post-INFCE Policy Jul-Dec 1979

With its commitments to limiting reprocessing and plutonium supplies to only what was needed for R&D work on breeder reactors, the Carter administration generated strong opposition in Western Europe, especially France and West Germany, where thinking was far more optimistic about the potential of breeder reactors and the relative danger of plutonium. One of the worries that the British and French had was that Washington would use consent right to prevent the transfer of spent fuel from Japan to Western Europe "hinder the execution of their existing contracts to reprocess foreign fuel and to
head off the planned expansion of their reprocessing facilities." According to the author, London and Paris had a "commercial interest ... in selling reprocessing services at a high premium to Japan and others, which will help meet the front-end construction costs of their reprocessing facilities."

According to the author, one of the differences between U.S. and European perceptions of plutonium was that the latter had "insist[ed] in in INFCE on the intellectually dishonest conclusion that the proliferation risks of separated plutonium and irradiated spent fuel are not significantly different." While the West Europeans did not deny that plutonium posed a proliferation risk and supported U.S. efforts to limit the spread of sensitive technology, it was not clear how long they would continue to do so.

Document Document 12A


Source: Smith records, box 6, unlabeled file

A discussion paper that Washington had circulated among INFCE participants (see 12A) raised the basis for a possible "consensus" position designed to speak to allies that were committed to the plutonium economy. While associating plutonium and enriched uranium with proliferation risks, the paper only called for limiting such uses, pursuit "where economically justified," and institutional measures to "contain or reduce the risks."

Document Document 12B

Department of State telegram 296435 to U.S. Embassy Tokyo, "US Japan Discussions on Post-INFCE Regime," 15 November 1979, Confidential

Source: RG 59, AAD

Discussing the U.S. paper on the post-INFCE situation with Assistant Secretary of State Thomas Pickering, Atsuhiko Yatabe suggested the need for the "Western democracies" to develop an agreed position on fuel cycle and nuclear export policy that would be applied "to those outside the group", implicitly, limiting the ability of developing nations/the Third World to pursue risky nuclear energy capabilities. Pickering was not so sure about the merits of "a blatantly discriminatory approach." Differences in approach toward reprocessing and plutonium also surfaced during the Pickering-Yatabe discussions. The
latter mentioned the U.S. observation that an International Plutonium Storage (IPS) regime might lead to the "premature separation of plutonium" and asked if that was a widely-held view. Pickering said that it was, including members of Congress who followed nonproliferation issues.

**Document Document 12C**

Department of State telegram 298150 to U.S. Embassy Tokyo, "U.S.-Japan Consultations on Non-Proliferation: Non-INFCE Subjects," 15 November 1979, Secret

Source: RG 59, AAD

The Pickering-Yatabe discussion turned to Tokai Mura and Pickering mentioned the U.S. hope that the "main plant would be converted to full scale coprocessing" as stipulated by the 1977 communique. Yatabe emphasized the "difficulty" of the conversion and added that "considerable time would be needed to scale up from the experimental work ....to coprocessing at the main plant."

**Document Document 13**


Source: RG 59, Records of Policy Planning Staff Director Anthony Lake, 1977-1981, box 6, T 4/1-15/80

Concerned about "unnecessary irritants" in relations with major allies, Smith proposed rethinking U.S. policy on reprocessing. Whatever Washington perceived to be the risks of reprocessing and plutonium use, Smith argued that Japan and major Western European allies will continue work in those areas. Moreover, they look at the United States as an "unreliable supplier" and U.S. influence "over nuclear trade and programs is becoming increasingly limited." Therefore, to improve the nonproliferation regime through agreement on such matters as full-scope safeguards and export controls, Smith argued that Washington needed to develop consensus positions on disputed issues. That would involve developing new criteria for evaluating countries on the basis of their proliferation risk; those involving the least risk and in the top rung were major allies, which were also nuclear exporters, and otherwise "indispensable to improving the nonproliferation regime."
For allies with "advanced nuclear programs" and strong interests in breeder reactor research, Smith raised the possibility replacing case-by-case approval with "batch or generic authorizations (for a period of years) for reprocessing and plutonium use for breeder [reactor] R&D, subject to interruption only when there is a material breach of agreement." He advised against any effort to "obstruct reprocessing" in Japan because it would cause "major damage" in the relationship and "only indirectly contribute to nonproliferation." As reprocessing had already begun at Tokai Mura, "Japan already has the ability to produce weapons grade material"; a second reprocessing facility would not set any precedent, although it would be necessary "to seek a mutually agreeable arrangement ... as to timing, safeguards, and other institutional and technical measures."

To manage the resultant plutonium supply from reprocessing in Japan or other countries, Smith suggested such alternatives as depositing it at an International Plutonium Storage (IPS) facility, use in the production of mixed oxide (MOX), and definite conditions, e.g., "to be used in specified research." The idea of an IPS system was then under discussion, although some worried that its existence could "legitimate premature separation of plutonium." If such a system was created, Smith believed, it should be under IAEA control. Its existence, Smith suggested, would "reinforce the perception that plutonium is a particularly dangerous material and legitimize actions to assure that it is used only for specified peaceful purposes under safeguards." Smith did not mention that the creation of an IPS would run athwart President Carter's PD-8 which sought to discourage plutonium storage.

Document Document 14

State Department memorandum, "Extension of Takai [sic] Mura: Meeting with Minister Sumiya," 17 March 1980, with State Department telegram attached, Confidential

Source: Smith records, box 17, Japan (January-June 1980)

With the extension of the Tokai-Mura agreement under discussion, State Department officials wanted to leave in place the language about "no major moves" toward the second reprocessing plant. Changing the language "might well be interpreted at home and abroad as U.S. acquiescence in commercial scale reprocessing in Japan without condition." As part of the extension, U.S. officials wanted to set conditions, such as an agreement on using plutonium only for the fast breeder experimental program, but not to fuel light water reactors.

Document Document 15
Memorandum to the Secretary of State from Gerard C. Smith, "Re PRC Meeting, April 9,"
9 April 1980, Secret

Source: RG 59, Smith records, box 6, Post-INFCE Policy March-April 1980

Smith wrote to Vance just before a meeting of the Policy Review Committee (PRC), and judging by the underlining and the stamp ("CV"), Vance read Smith's paper. Dismissing the argument that his approach was discriminatory, Smith gave specific examples of how U.S. nuclear nonproliferation policy had discriminated from the outset and how the Carter administration continued to make distinctions between countries, e.g., by trying to prevent reprocessing in Argentina and Brazil but condoning it in Japan. "If no discrimination is to be the criterion, we have but two alternatives -- no exports or treat all nations alike -- Iraq and Libya like Japan and Germany."

Document Document 16

Memorandum for Zbigniew Brzezinski from Jerry Oplinger, NSC Staff, "Minutes of the PRC on April 9, 1980," 10 April 1980, enclosing minutes of meeting on "Non-Proliferation Matters," Secret

Source: Jimmy Carter Presidential Library, RAC Document NLC-28-32-8-2-6

At the meeting of the Policy Review Committee, Smith gave a full briefing of the policy and procedural changes that he sought, including the relaxation of "our MB-10 policy to permit generic approval of reprocessing and plutonium use in advanced countries." While Vance believed that Smith's paper should go forward for presidential consideration, not everyone agreed. Brzezinski's deputy David Aaron observed that "what the US would give up is clear: it is not clear what we would require in return," especially what requirements would be set to regulate the "flow" of plutonium. He wanted other options explored and more clarity on the "quids" to the United States. White House adviser Stuart Eisenstadt and Chairman of the Council on Environmental Quality Gus Speth also raised critical questions. The latter observed that the "paper presented on point of view; the President needs to hear the contrary case." In light of the comments, Vance proposed that an options paper be prepared for discussion in two weeks' time. By then, he would be out of office, having resigned in protest of President Carter's decision to approve the Iran hostage rescue mission.

Document Document 17
The paper that Vance asked for exhaustively spelled out two major options, including sub-options, and their pros and cons. Option 1 was the status quo: the case-by-case procedure. Option 2 would provide "advance understandings, consistent with the NNPA, covering certain limited categories of requests" for reprocessing. Sub-option 2-A was a more restrictive approach because it would permit reprocessing of spent fuel and plutonium use for breeder and advanced reactor RD&D programs only where Washington had made "substantial commitments" prior to the new U.S. policy of 1977. A "clear line" would be drawn against retransfers for reprocessing for countries with no breeder or other advanced reactor RD&D programs.

Sub-option 2-B was a less restrictive than 2-A: it was "an evolutionary approach" to provide agreement to reprocessing programs "substantially committed to in the next ten years in countries where there is no demonstrable proliferation risk" and had a "large electrical grid and an advanced nuclear program" (meaning only Western Europe and Japan). Moreover, Washington would "indicate willingness to consider generic agreements with countries with good nonproliferation credentials and no spent fuel storage alternatives."

On the Government of Japan's desire for U.S. approval of reprocessing, the paper made the point that Tokyo faced "significant financial penalties" if it could not transfer U.S. spent fuel to Western Europe for reprocessing. So far, Japan was obliged to pay 27 percent of the construction costs of new European reprocessing plants and had already paid five percent of the costs. Those costs made it "politically difficult" for the United States "to force Japan to forgo a future domestic reprocessing alternative to the exorbitant rates, uncertainties, delays and foreign dependence involved in contracts for reprocessing in Europe."

For the sake of policymakers who did not want to wade through the presidential decision paper, a short version of the options paper was circulated. It highlighted Option 2-B as the preference because it offered the "best chance of preserving reasonable technical and
economic criteria for legitimate use of plutonium while still meeting the demands of negotiability with the Europeans and Japanese."

Document Document 19

Leon Billings to the Secretary, "Non-Proliferation," 23 May 1980

Source: Source : RG 59, Muskie Subject Files, box 3, Non-Proliferation

Leon Billings https://www.nytimes.com/2016/11/18/us/politics/leon-billings-dead.html (the legislative author of the Clean Air Act) had been one of Senator Muskie's top aides and served as his chief of staff at the State Department. Arguing that it was premature to make a decision on Smith's proposals, he recommended against another PRC meeting and proposed that the Secretary convene "an interagency group chaired by this department to develop for you an analysis of the pros and cons of changing the President's non-proliferation policy."

Document Document 20

Gerard C. Smith to the Secretary, "Non-Proliferation Planning Assumptions," 23 May 1980, Secret

Source: Smith records, box 6, Post-INFCE Policy May-July 1980

Smith sent his new boss a distilled version of his policy proposals.

Document Document 21

Policy Planning Staff, "The Reprocessing and Plutonium Use Planning Assumptions," 27 May 1980, with cover note from Paul Kreisberg to Anthony Lake, Secret

Source: RG 59, Lake Records, box 6, TL 5/16 - 5/31/80

To get a "contrary view" of Smith's recent paper, Billings asked Raymond Seitz, an official with the Executive Secretariat, to ask the Policy Planning Staff to work up a critique. Drafted by "Bob" [Policy Planning Staff member Robert Gallucci], the paper took the view that it was a mistake to assume that a move toward plutonium breeder reactors was inevitable. Not only was it dangerous, it was far from an accepted technology. "There is
still no accepted way to have breeders without having fuel loadings which would each contain enough plutonium to fabricate hundreds of nuclear weapons; and there is also still no good reason why we or our allies need embrace that technology at this time." Moreover, abandoning President Carter's 1977 policy, "will certainly raise doubts everywhere about the US commitment to non-proliferation objectives, at least as we defined them in 1977. While the new policy is supposed to increase our influence, it may in fact only decrease our credibility."

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**Document Document 22**

Jerry Oplinger to Leon Billings and Berl Bernhard, "PRC Options Paper re Non-Proliferation," 29 May 1980, Secret

Source: RG 59, Muskie Subject Files, box 3, Non-Proliferation

NSC Staffer Gerald Oplinger was critical of Smith's initiative and the resulting options paper which found inscrutable because of its "obfuscation, poor drafting, [and] the skewing of its analysis to support a set of policy pre-judgments." In an assessment sent to top aides of the new Secretary of State Edmund Muskie, Oplinger wrote that "we need not move from where we are now; nobody is hurting and the existing Presidential guidelines will provide plenty of plutonium for reasonable R&D programs." If it was necessary to change policy, Option 2 (a) "is a very generous concession and the outer limit of what we can do while retaining a meaningful policy."

Oplinger did not believe that a shift in policy was essential for the sake of good relations with key allies: "There is little evidence that the governments concerned (as opposed to their nuclear bureaucracies) regard the nuclear issue as critically important or urgent." Moreover, he believed that if that if Washington took a more accommodating approach to reprocessing and plutonium a far worse situation would emerge. If any of three projected reprocessing plants in Japan and Western Europe went on-line, they:

would more than swamp the projected plutonium needs of all the breeder R&D programs in the world. Three of them will produce a vast surplus of pure, weapons grade plutonium amounting to several hundred tons by the year 2000. Not only would that stockpile of separated plutonium constitute a danger in itself, it would drive these nations, and those watching their example, into the recycle of plutonium in today's generation of reactors for economic reasons.

Oplinger's statement about "weapons grade" notwithstanding, Tokai Mura would be producing reactor-grade plutonium that could be weaponized. Regarding U.S. leverage to influence Japanese and West European decisions on reprocessing, Oplinger believed that Washington had more than Smith and others acknowledged. "More than half of the spent
fuel which could be reprocessed in the new French and British plants, and virtually all of the fuel for the Japanese plant, is under US control." If the United States applied its consent rights rigorously it would "make the completion of these plants a much more dubious commercial venture, and sharply reduce incentives to complete them."

**Document Document 23**

Memorandum, "Non-proliferation Policy," n.d. [circa 3 June 1980], Secret

Source: RG 59, Muskie Subject Files, box 3, Tarapur

In a meeting with top State Department officials on 3 June 1980, Smith made his case for discussions with the Europeans of a new approach toward reprocessing, away from case-by-case and toward generic approval. With Berl Bernhard, one of Muskie's senior advisers, cautioning against creating perceptions that President Carter's nonproliferation policy was being weakened Policy Planning Director Anthony Lake suggested that it was "less dangerous, in terms of perception, to ask for the President's informal approval for the approaches to be made, than seeking the President's formal blessing." In any event, it was not necessary to make any decisions: before Washington even considered taking the "generic" approach, it would have to know "what quids we would get from the Europeans."

**Document Document 24**

Gus Speth to Secretary of State Edmund Muskie, "Implementation of the President's Non-Proliferation Policy," 4 June 1980, Secret

Source: RG 59, Muskie Subject Files, box 3, Non-Proliferation

James Gustave (Gus) Speth, a founder of the Natural Resources Defense Council, chaired the (now moribund) Council on Environmental Quality; he advised Secretary Muskie to abide by President Carter's 1977 policy. He saw "little reason either to change our basic policy or to seek marginal changes in relations with our major allies at the price of our non-proliferation principles." Supporting "clear U.S. opposition to separation or use of plutonium and weapons usable materials," Speth believed that Washington should refuse to "grant MB-10's for reprocessing or for plutonium use commitments made after our 1977 policy announcement, based on the frank and explicit recognition that safeguards, as presently constituted, do not work for plutonium and highly enriched uranium." Not only should it be U.S. policy "to discourage the expansion of foreign reprocessing
capacity," Washington should consider "active" opposition to the proposed International Plutonium Storage plan as presently conceived.

Document Document 25

Talking Points, with Policy Planning Staff paper and memoranda from Holbrooke, Smith, and Pickering attached, 4 June 1980, Secret

Source: RG 59, Lake Records, box 7, TL Papers on Specific Mgs - Appoint. 1980

To prepare for another meeting with Secretary Muskie on the Smith initiative, Anthony Lake had a compilation of background material, including the critical Policy Planning Staff paper discussed earlier (see document 21) but also memoranda from Smith, Pickering, and Assistant Secretary of State for East Asian and Pacific Affairs Richard Holbrooke. Holbrooke argued that a failure to change the U.S. approach to Japanese reprocessing "would suggest ... that we are insensitive to their most basic security and economic requirement" and could "also open a fissure in our relationship with the most profound consequences for US interests." The talking points laid out the position that Lake supported: a PRC meeting or a formal presidential decision were unnecessary because it "would restrict us and commit President in negotiations" and also "risks public perception of US concession" on nonproliferation policy. Instead, the President would be asked to approve "exploratory discussions" processing from Option 2.

Document Document 26

Leon Billings to the Secretary, "The Attached," 5 June 1980

Source: RG 59, Muskie Subject Files, box 3, Non-Proliferation

In memoranda forwarded by Billings, senior adviser Berl Bernhard argued against a PRC meeting, delay in giving Smith instructions, and bringing Senator John Glenn (D-OH) into the "negotiating team." A major influence in Congressional nonproliferation policy, Glenn believed "that any modification of our current position is inconsistent with the President's 1977 statement and would see to it that nothing is done until there has been a complete review of our non-proliferation position nationally." Bernhard believed that Smith was less than candid in discussing his objectives: "Either he is camouflaging policy with rhetoric or he is, with design, understating his intent to lead to a more generic approval of U.S. origin plutonium."
**Document Document 27**

Memorandum for the Files by Leon Billings, 6 June 1980, Secret

Source: RG 59, Muskie Subject Files, box 3, Non-Proliferation

Discussing a meeting with Smith earlier that day, Billings observed that "Neither Ambassador Smith nor his colleagues have been forthcoming" on the question of breeder reactor development. According to Billings, "It was only in the eleventh hour, prior to the Secretary's potential discussion of this issue with the President, that Ambassador Smith raised the question of modifying US policy to permit the use of plutonium for demonstration programs." He believed that this represented a policy change that needed to be discussed publicly, not one that "is derived as a result of negotiations."

**Document Document 28**

Leon Billings to the Secretary, "Non-Proliferation," 10 June 1980, Secret

Source: RG 59, Muskie Subject Files, box 3, Non-Proliferation

Worried that his boss would "duck" the nuclear issue, Billings told him that he was willing to "back off," but urged against sending a memorandum to the President that "is biased toward [Smith's] position." He advised Muskie to take into account "the bias of State Department negotiators," especially Smith's background as a "life-long nuclear power advocate" who sees "current resistance [to nuclear power] in this country as something which should be overcome."

**Document Document 29**


Source: State Department FOIA release

The memorandum that the State Department sent to President Carter did what Leon Billings suggested by indicating both the pros and cons of a decision to authorize
exploratory discussions with Japanese and Western European officials on post-INFCE matters. An interesting reason for not going ahead was the perception that the United States would be aiding "European and Japanese nuclear programs (in particular breeder, advanced reactor and reprocessing programs) that might otherwise fail." President Carter authorized Smith to hold talks, but as Brzezinski mentioned in the cover memorandum, he wrote that "I may not wish to go forward" with the proposals.

**Document Document 30**


Source: RG 59, Smith Records, box 5, Memcons 1980

Smith's explorations included a meeting with Atsuhiko Yatabe, the top Ministry of Foreign Affairs official on nuclear energy policy. Smith told him that he wanted to update the nonproliferation regime in part by including an agreement that would give Japan "greater predictability regarding the exercise of US consent rights over reprocessing of US origin material" and "restore greater confidence in supply relationships." Understandings were also necessary on full-scope safeguards, delay of thermal recycle, a "better approach to dealing with problem countries," and more effective control of plutonium.

Yatabe wanted more time to respond to Smith's thinking, but he emphasized the important of the second reprocessing plant in Japanese thinking: it "simply had to be pursued." But he could not make any guarantees about plutonium disposal: he "was not sure if Japan could provide the US with a plutonium supply/demand balance which would satisfy US requirements", that is, that the plant would only produce enough plutonium for "breeders and advanced reactor needs." Further, if Japan had to store "excess plutonium" it was not clear whether an IPS would be available in time. ACDA's Charles Van Doren was not sure either, but suggested that the direction of thinking was towards a "modest" IPS system.

**Document Document 31**

Memorandum on "Japanese Reprocessing," 2 August 1980, with fax cover sheet from Henry Owen to Gerard C. Smith attached, Secret

Source: RG 59, Smith records, box 17, Japan (January-June 1980)

Yatabe's certainty about the second reprocessing plant was called into question by recent information, conveyed through a "Nodis" telegram from the embassy in Tokyo, on a draft
report by the quasi-governmental Japanese Atomic Energy Research Institute, which concluded that Japan did not need the second plant. Moreover, the Tokai Mura reprocessing plant "can supply all of Japan's foreseeable plutonium needs for R&D on breeders and advanced reactors." According to the memorandum from Henry Owen, the report was "something of a bombshell" because it provided "impressive confirmation we have yet seen of the basic premises underlying the President's 1977 policies: that the need for large scale reprocessing and commercial use of plutonium remains distant and uncertain, that commitments to those technologies are uneconomic, and that this is true even for countries as energy-dependent as Japan."

Document Document 32


Source: AAD 1978

As a contribution to a GAO study of the Nuclear Nonproliferation of 1978, the U.S. Embassy in Tokyo provided a detailed report on U.S. government, including the Embassy's, interactions with the Japanese government on nonproliferation policy and current Japanese thinking on U.S. policy. As noted in previous documents, the Japanese were highly critical of the NNPA but, as the Embassy observed, they would take the criticism only so far, Given Japan's dependence on the United States for enrichment services and nuclear reactor components, it would not "wish to risk a cut-off of such supplies by too strident opposition to U.S. policies."

Perhaps reflecting the internal debate in Japan over the second reprocessing plant, the embassy noted that plans "appear to be in a state of flux." If, however, Japan decided to go forward, "it will be done only with the assurance that the U.S. will change its policy, will support the conclusions of INFCE in regard to reprocessing, and will not stand in Japan's way."

Document Document 33

Gerard C. Smith to Atsuhiko Yatabe, with enclosed memoranda, 16 September 1980, Confidential

Source: State Department FOIA release
Following up on the conversation with Yatabe in late July, Smith sent him papers in which he developed further his thinking about an improved nonproliferation regime involving "greater harmonization" of policies between the major industrial states. Improvements in the nonproliferation system would enable Washington to move away "from granting case-by-case approvals for reprocessing and plutonium use under specific implementing' conditions." But advanced approval would be tied to specific Japanese projects, e.g., breeder and advanced reactor research and development. If Japanese reprocessing produced "excess plutonium," the Japanese would store it in an "agreed IPS or equally effective regime."

Document Document 34


Source: RG 59, Smith records, box 17, Japan (January-June 1980)

This State Department message included some information from the text of the reference telegram, Tokyo 14582 (which may have been the source on the JAERI report cited in Document 31). According to that message, which is presently unavailable, some elements of the government, including the Ministry of Industry and Technology, supported the second reprocessing plant. The State Department wanted to learn more about Japanese thinking, but realizing that it was a "delicate" topic cautioned against bringing the matter up directly with officials. Instead, the Department asked for any additional information that the Embassy had, especially on why MITI and JAERI held such different views.

Document Document 35


Source: Digital National Security Archive

Under the 1977 Tokai Mura agreement, the Japanese government could reprocess 99 metric tons (tonnes) of spent fuel, a limit that it would reach in the first months of 1981. Seeking relief from the limit, Tokyo sought a permanent agreement on Tokai Mura or at least an extension and modification of the original understanding. Moreover, optimistically believing that the fast breeder reactor would be a going concern by the end of the century, the Japanese government wanted to move ahead on the second reprocessing plant so that it could fuel experimental breeder reactor. The State
Department believed that safeguards requirements for reprocessing in Japan or anywhere else needed to be resolved, but that an interim agreement could be reached. If reprocessing at Tokai Mura came to a halt because a "formula for relief" had not been devised, there could be "serious negative implications for US-Japanese relations."

**Document Document 36**


**Source:** Digital National Security Archive

A week before the end of Carter's presidency, the White House reached an interim agreement with Japan, which authorized Tokai Mura to reprocess fifty more tonnes of spent fuel to keep the plant operating. Both governments agreed on the importance of effective IAEA safeguards at Tokai Mura and Japan would continue to "support improvements in safeguards effectiveness through the testing of advanced ... instrumentation and techniques" and consult regularly with the State Department on developments. Moreover, Japan would not make any "major moves" toward establishing a new reprocessing plant before 1 June 1981 and the Japanese Nuclear Fuel Services Company would limit itself to consultations and surveying possible sites for the development of a plant. "If an issue arises as to what constitutes a 'major move,'" Tokyo and Washington would "promptly consult" to reach a mutual understanding.

**Notes**


Some of the plutonium would be used for a fuel fabrication plant that would be used to produce uranium-plutonium mixed oxide (MOX) for fueling light water reactors. For a critical assessment of MOX by the International Panel on Fissile Materials, see Frank von Hippel and Gordon MacKerron, Alternatives to MOX: Direct-Disposal Options for Stockpiles of Separated Plutonium, Research Report No. 13 (2015).


Sato may have considered a nuclear weapons option for Japan as a bargaining tool to make diplomatic gains on the reversion of Okinawa. See Tristan Volpe, “Atomic Leverage: Compellence with Nuclear Latency,” Security Studies 26 (2017): 517-44.