Comptroller General
of the United States
Washington, D.C. 20548

B-230201

February 29, 1988

The Honorable Dante B. Fascell
Chairman, Committee on Foreign Affairs
House of Representatives

Dear Mr. Chairman:

This is in response to your January 29, 1988, letter requesting our analysis of the proposed Agreement for Cooperation between the Government of the United States and the Government of Japan Concerning Peaceful Uses of Nuclear Energy (Agreement).

In subsequent conversations with your staff, it was agreed that our review of the proposed Agreement would focus on whether the advance approvals for the reprocessing and retransfer of United States-origin nuclear material would meet the requirements of the Atomic Energy Act of 1954 (Act), as amended. In particular, you wanted our views on whether the requirements provided in Section 123 of the Act that the Agreement contain guaranties of United States consent and prior approval for retransfer and reprocessing activities are satisfied by the proposed Agreement and if the standard of timely warning provided in Section 131 of the Act would be met under the terms of the proposed Agreement.

As you are aware, the Agreement is the most fundamental legal mechanism by which nuclear cooperation is regulated between the United States and other nations. It includes the general "terms, conditions, duration, nature and scope of the cooperation." 42 U.S.C. § 2153. Section 123 of the Atomic Energy Act of 1954, as amended, addresses the substantive and procedural requirements of the Agreement. Subsection 123 (a) prescribes nine requirements that must be included in the Agreement. Of concern here are (1) a guaranty by the cooperating party that any material transferred pursuant to the Agreement will not be transferred to unauthorized persons or beyond the jurisdiction or

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control of the cooperating party without the consent of the United States, and (2) a guaranty by the cooperating party that no material transferred pursuant to the Agreement will be reprocessed without the prior approval of the United States. 42 U.S.C. § 2153(a)(5) and (7).

On the other hand, subsequent arrangements are specific contracts, approvals, authorizations and other arrangements required to implement an Agreement. See 42 U.S.C. § 2160; S. Rep. No 467, 95th Cong., 1st. Sess. 10 (1977). Section 131 of the Act regulates subsequent arrangements. The subsequent arrangement provision provides the test the executive branch must apply in evaluating (1) whether to approve a request for reprocessing of spent nuclear fuel that had originally been exported or produced through the use of any nuclear materials and equipment or sensitive nuclear technology exported from the United States; or (2) whether to approve the transfer back of the plutonium in quantities greater than 500 grams resulting from the reprocessing for use in another nuclear reactor. The Act mandates that United States authorization for such reprocessing or retransfers not result in a significant increase of the risk of proliferation of weapons beyond that which exists at the time the approval is requested. In addition, the statute requires that:

> ". . . Among all the factors in making this judgment, foremost consideration will be given to whether or not the reprocessing or retransfer will take place under conditions that will ensure timely warning to the United States of any diversion well in advance of the time at which the non-nuclear-weapon state could transform the diverted material into a nuclear explosive device." (Emphasis added.)

The Act explicitly ties the timely warning standard to non-nuclear-weapon states. This is because a non-nuclear-weapon state has not previously been known to have detonated a nuclear explosive device. Accordingly, there is a heightened risk of proliferation when reprocessing or the return of plutonium involves a non-nuclear-weapon state.

Japan is a non-nuclear weapon state. In the past, Japanese requests for approvals for reprocessing or the retransfer back of plutonium from a third country have been provided on a request-by-request basis under the subsequent arrangement process. The proposed Agreement in the accompanying Implementing Agreement, however, provides blanket authority to Japan to reprocess and store United States-origin nuclear material within Japan, as well as the authority to transfer

spent fuel to designated facilities in England and France for reprocessing and have the resulting plutonium subsequently returned. The consents and prior approvals for these activities would last the life of the Agreement and apply to facilities within Japan not yet in existence.

We conclude that the proposed Agreement does not meet the requirements of subsections 123(a)(5) and (7) of the Act or the timely warning standard of Section 131. Although the Act does not explicitly require that consent or advance approvals only be granted under the subsequent arrangement process or on a request-by-request basis, it is clear from the structure of the Act and its legislative history that it was anticipated that the guaranties of consent and prior approval over retransfer and reprocessing activities would provide the United States with the opportunity to apply the substantive standards of the subsequent arrangement process, including timely warning, in a systematic and effective manner. This is particularly true when the reprocessing or retransfer of plutonium involves a non-nuclear-weapon state.

The Implementing Agreement that accompanies the proposed Agreement for Cooperation provides blanket approval for reprocessing within Japan and the return of plutonium from third countries to Japan that would leave the United States with no effective control over the life of the proposed Agreement for these activities. The United States would have to rely solely on the monitoring of these activities by the executive branch, as opposed to before-the-fact determinations made through the subsequent arrangement process. The United States would also have to rely on its ability in the extreme case to terminate the proposed Agreement or suspend the Implementing Agreement to ensure that the reprocessing within Japan and the return of plutonium to Japan, does not, over the 30-year Agreement, create increased risks of proliferation. Further, advance approval deprives the Congress of its oversight function.

We do not believe the Act intended that the subsequent decision-making or oversight of the United States would be based only on the executive branch's assessment of the implementation of the activities authorized by a one-time blanket approval for reprocessing activities and the subsequent return of plutonium to a non-nuclear-weapon state such as Japan. Nor did the Congress anticipate that United States oversight would be limited to its ability to terminate or suspend an agreement under certain extreme conditions.

Rather, we think that by providing for a separate section in the Act on subsequent arrangements and requirements for consent and prior approval over retransfer and reprocessing activities, that the Congress sought to ensure that the United States would maintain effective control over these activities through application of the standards of the subsequent arrangement process in a meaningful way.

We think that it is particularly difficult to apply the timely warning standard to advance approvals that involve reprocessing in or the transfer of plutonium to a non-nuclear-weapon state. In our view, it cannot be asserted with any degree of confidence that over the succeeding 30-year period the technical capabilities of the cooperating party,1/ anticipated conversion times, safeguards capabilities, United States political relationships with the cooperating party, etc. would all be such as to assure the existence of timely warning at all times or even ensure there would be no increase in proliferation risks over the life of the agreement. Accordingly, we do not think that the timely warning standard can be applied in a systematic and effective way to the blanket approvals at issue here.

Finally, we recognize that Japan is an advanced nuclear nation that is seeking nuclear cooperation on a long-term, predictable, reliable basis. However, the Act does not differentiate between advanced nuclear countries that have not detonated nuclear weapons and those that have. Rather, the Act applies heightened scrutiny to non-nuclear-weapon states, whatever their state of advancement. Since Japan is a non-nuclear-weapon state, the timely warning standard must be applied as intended by the Act.

There is, however, flexibility in the Act. The Act provides for a type of generic or programmatic approval process, that we believe would provide Japan with the long-term, predictable terms it needs while still allowing the United States to maintain effective oversight. Under Subsection 131(a)(3), the terms and conditions necessary for the

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1/ We recognize that from a strictly technological base, Japan can hardly be distinguished from a nuclear-weapon state in that it has the scientific expertise and nuclear material necessary to construct a nuclear explosive device. However, as the Departments of State and Energy make clear in their analysis, should Japan choose to build a nuclear explosive device, it would need to acquire unique equipment and production facilities not presently available domestically in Japan.

approvals associated with reprocessing can be included in the Agreement. However, the actual approval is still provided under the subsequent arrangement process, but in an expedited manner.

Our more detailed analyses are included in the enclosed legal memorandum.

Sincerely yours,

Milton J. Socolar

for Comptroller General
of the United States

Enclosure

B-230201

LEGAL MEMORANDUM

REVIEW OF THE PROPOSED AGREEMENT OF COOPERATION

This memorandum is in response to a request of the Honorable Dante B. Fascell, Chairman of the House Foreign Affairs Committee, requesting our analysis of the proposed Agreement for Cooperation between the Government of the United States and the Government of Japan Concerning Peaceful Uses of Nuclear Energy (Agreement).

In subsequent conversations with the Chairman's staff, it was agreed that our review of the proposed Agreement would focus on whether the advance consent and prior approvals for the retransfer and reprocessing of United States-origin spent fuel would meet the requirements of the Atomic Energy Act of 1954, (Act) as amended. Specifically, the Chairman is interested in our views on whether the requirements provided in Section 123 of the Act for the Agreement pertaining to the guaranties of consent and prior approvals for and retransfer reprocessing activities are satisfied by the proposed Agreement and if the standard of timely warning provided in Section 131 of the Act would be met under the terms of the proposed Agreement.1/

Our detailed analysis follows:

Background of the Proposed Agreement

One of the purposes of the Atomic Energy Act was to ensure effective controls by the United States over its exports of nuclear fuel, equipment and technology. 22 U.S.C. § 3202(d). It was hoped that, in this way, the United States could restrict the proliferation of nuclear weapons while, at the same time, confirming its reliability as a supplier of nuclear reactors and fuel for peaceful purposes to nations which adhere to effective non-proliferation policies. 22 U.S.C. § 3201.

Three legal instruments are primarily relied upon to achieve this control. The most fundamental mechanism is the "Agreement for Cooperation" between the United States on the one hand and nations or international organizations on the

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1/ The pertinent sections of the Act are set out in Appendix I. The pertinent sections of the proposed Agreement and the accompanying Implementing Agreement are set out in Appendixes II and III.

on the other. It includes the "terms, conditions, duration, nature, and scope of the cooperation." 42 U.S.C. § 2153(a).

However,

> ". . . agreements for cooperation generally are not in and of themselves commitments to supply nuclear reactors and fuel; rather they set forth the terms under which such commitments may be made." S. Rep. No. 467, 95th Cong., 1st Sess. 3 (1977).

The Act sets forth nine guaranties or requirements to be contained in agreements for cooperation. 42 U.S.C. § 2153(a).

The second form of legal instrument is a "subsequent arrangement" pursuant to an agreement for cooperation. "These subsequent arrangements are specific contracts, approvals, authorizations and other arrangements required to implement an agreement for cooperation." H.R. Rep. No. 587, 95th Cong., 1st Sess. 17 (1977). See also 42 U.S.C. § 2160.

> ". . . Subsequent arrangements are extremely important, as they encompass many of the detailed arrangements for U.S. nuclear cooperation with foreign nations, including: the approval of reprocessing or re-transfers, contracts for the provision of enriched uranium, physical security arrangements, detailed safeguard arrangements. . . . It should be noted that private contracts and arrangements are not 'subsequent arrangements.'" S. Rep. No. 467, 95th Cong., 1st Sess. 10 (1977).

The third major element of control, but not of concern here, is the export licensing process.

Among the primary proliferation concerns are those activities associated with the reprocessing of spent nuclear fuel.2/ Spent fuel is the waste product from the use of enriched uranium in a nuclear reactor to produce power. Its reprocessing involves chemical separation of plutonium from the components of the spent fuels. The separated plutonium can be recovered for peaceful future uses for certain other nuclear reactors. However, unlike the low-level enriched

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2/ Proliferation risks include the proliferation of nuclear explosive devices or the direct capability to manufacture or otherwise acquire such devices. See 22 U.S.C. § 3201.

uranium used in most nuclear reactors, plutonium is fuel of weapons-usable quality. Therefore, its potential diversion for use in a nuclear explosive device is a considerable proliferation risk. This concern is exacerbated when the reprocess or the return of plutonium resulting from the reprocessing involves a non-nuclear-weapon state.

Up until recently, approvals for the transfer of spent fuel for reprocessing and the retransfer of plutonium back to a non-nuclear-weapon state were accomplished under the subsequent arrangement process. The required proliferation risk determination and timely warning evaluation were applied on a request-by-request basis.

This changed in 1984 and 1985. The United States in those years entered into agreements of cooperation with Sweden, Norway, and Finland that for the first time provided a cooperating party with the long-term, advance consent of the United States for reprocessing of United States-supplied origin nuclear material in designated facilities in England and France. See, respectively, H.R. Doc. No. 163, 98th Cong., 2d Sess (1984); H.R. Doc No. 164, 98th Cong., 2d Sess. (1984); and H.R. Doc. No. 71, 99 Cong., 1st Sess. 55 (1985). These consents were for 30 years and were provided in the minutes to the agreements. The minutes were designated as an integral part of each agreement.

Although these advance approvals represented a change in our handling of reprocessing requests, it should be noted that the advance approvals contained in the agreements with Sweden, Norway and Finland allowed only the retransfer of spent fuel to designated facilities in England and France. Both of these nations are nuclear-weapon states. The return of the resulting plutonium to Sweden, Norway or Finland, which are non-nuclear-weapon states, would require further approval(s) of the United States under the subsequent arrangement process. This assures continued oversight by the Congress and notice to the public. Hence, the United States retained effective control over the export of its nuclear material to the non-nuclear-weapon states involved.

There was no congressional challenge to the agreements with Sweden, Norway or Finland. However, Senator Alan Cranston, Congressman Howard Wolpe, Congressman Michael Barnes and six public interest organizations subsequently filed suit in U.S. Federal District Court contesting the authority of the Administration to approve in advance retransfer or reprocessing of spent fuel, but their law suit was dismissed on the basis of non-justiciability. Cranston v. Reagan, 611 F. Supp. 247 (D.C.D.C. 1985).

The Proposed Agreement

The advance consents in the proposed Agreement go much further than those provided for in the agreements entered into with Sweden, Norway, and Finland. The "Implementing Agreement Between the Government of the United States of America and the Government of Japan pursuant to Article 11 of Their Agreement for Cooperation Concerning Peaceful Uses of Nuclear Energy" (Japanese Implementing Agreement) would provide Japan with new long-term United States approvals that include:3/

> -- reprocessing and alteration in form or content of United States-origin fuel at designated facilities within Japan.4/

3/ The Implementing Agreement is set out in Appendix III.

4/ The principal consent and approvals contained in the Japanese Implementing Agreement apply to facilities listed in the four Annexes to that Agreement. The first three Annexes list existing facilities of the following type:

> Annex 1 - facilities for reprocessing, alteration in form or content and storage, including the reprocessing plant and associated facilities at Tokai-Mura, and the British Sellafield plant and the French at LaHague.
>
> Annex 2 - Other facilities where separated plutonium is located, including the Fugen ATR, the JOYO FBR, two LWRs at which mixed uranium-plutonium oxide fuel is present, and three critical assemblies.
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> Annex 3 - LWRs and GCRs from which spent fuel may be sent to Annex 1 facilities.

The fourth Annex lists facilities which are planned or under construction in Japan, and which are intended to be added to the other Annexes. It includes reprocessing facilities, plutonium fuel fabrication facilities, reactors and other facilities. All of the programmatic consents and approvals included in the Implementing Agreement can be extended to additional facilities within Japan by appropriate notification in writing by Japan to the United States and acknowledgement by the United States. The acknowledgement is limited to a statement that the notification has been received and must be provided no later than 30 days after

(continued...)

-- storage of plutonium in designated facilities within Japan.

-- the transfer of spent fuel from Japan to designated facilities in third countries for reprocessing and the subsequent return of the resulting plutonium to Japan. (At present the Sellafield Reprocessing Plant in the United Kingdom and the La Hague Reprocessing Plant in France would be designated.)5/

-- the transfer of unirradiated source material and low-enriched uranium to designated third countries but not for the production of high-enriched uranium.

-- the transfer of unirradiated nuclear material containing plutonium, in quantities not to exceed 500 grams per shipment and per Japanese facility each year, to designated facilities in third countries for irradiation and the subsequent return to Japan.6/

4/(...continued)
the receipt of the notification. An addition of a facility outside of Japan other than those designated in Annex 1 or in the Notes Verable can only be accomplished by the agreement of the parties.

5/ The return of the resulting plutonium from the United Kingdom and France would require long-term approval under the Agreement of Cooperation with EURATOM. The Japanese Implementing Agreement provides that the United States will give the necessary consent to third countries to allow the return of the recovered plutonium concerned in quantities of two kilograms or more per shipment to Japan. (Article 1, para. 3(a) (iii)). The President enclosed the text of a proposed subsequent arrangement with EURATOM that would allow the return of the plutonium.

6/ The return of the irradiated nuclear material would require the approval of the United States under the Agreement of Cooperation that the United States has with the third country. The Japanese Implementing Agreement provides that this advance approval will be granted. The President, in his submission to the Congress, included the proposed text of a subsequent arrangement with EURATOM and one with Norway that would provide the necessary approval on a long-term basis.

It must be kept in mind that Japan is a non-nuclear weapon state and that the proposed consents and approvals are much more comprehensive that those provided in the Sweden, Norway, and Finland agreements. Not only would these consents and approvals last the life of the proposed Agreement, but they would also apply to facilities in Japan not yet in existence.

A majority of both the Senate Foreign Relations Committee and the House Foreign Affairs Committee have challenged the proposed Agreement.7/ See Letter from 15 members of the Senate Committee on Foreign Relations to the President, December 17, 1987; Letter from 23 Members of the House Foreign Affairs Committee to the President, December 21, 1987.

These committees have requested that the proposed Agreement be renegotiated to bring it into conformity with United States law or if not renegotiated, that it be resubmitted to the Congress, with a waiver of statutory requirements, in accordance with Section 123a of the Act.8/ Under this provision, if the President submits an exemption, the

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7/ Under the requirements of Section 123(b), the President is to consult with the Senate Foreign Relations Committee and the House Foreign Affairs Committee for a period of not less than 30 days concerning the consistency of the terms of the proposed agreement with the requirements of the Act. 42 U.S.C. § 2153(b). This period has expired without the President responding to the concerns of the cognizant congressional committees.

8/ The President may exempt a proposed agreement for cooperation from any of the requirements of subsections 123(a)(1)-(9), if he determines that inclusion of any such requirement would be seriously prejudicial to the achievement of United States' non-proliferation objectives or otherwise jeopardize the common defense and security. 42 U.S.C. § 2153(a). However, any such proposed agreement for cooperation shall not become effective unless the Congress adopts, and there is enacted, a joint resolution stating that the Congress favors the agreement. 42 U.S.C. § 2153(d).

agreement must await affirmative action by the Congress through enactment of a joint resolution of approval.9/

Can an Advance Approval Be Legal?

The first issue we must determine, before we can address the specifics of the proposed Agreement is whether advance approvals are, in and of themselves, legal.

As noted previously, the agreement for cooperation is the most fundamental legal mechanism by which nuclear cooperation is regulated between the United States and nations or international organizations. It includes the general "terms, conditions, duration, nature and scope of the cooperation." 42 U.S.C. § 2153(a). On the other hand, subsequent arrangements are specific contracts, approvals, authorizations and other arrangements required to implement an agreement for cooperation. See 42 U.S.C. § 2160; H.R. Rep. No. 587, 95th Cong., 1st Sess. 17 (1977); and S. Rep. No. 467, 95th Cong., 1st Sess. 10 (1977).

The Atomic Energy Act, as amended by the Nuclear Non-Proliferation Act of 1978, Pub. L. No. 95-242, approved March 10, 1978, 92 Stat. 120 (Non-Proliferation Act), as amended, treats agreements for cooperation and subsequent arrangements in separate sections. Section 123 of the

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9/ On January 20, 1988, the Senate Foreign Relations Committee reported out a Senate Concurrent Resolution that states that it is the sense of Congress that:

> "(1) the programmatic consent to be granted by the United States on a one-time basis for Japanese processing, transport, and use of United States controlled plutonium during the thirty-year initial term of the proposed nuclear agreement for cooperations between the United States and Japan is not consistent with section 123 of the Atomic Energy Act of 1954, as amended; and
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> "(2) the President, in accordance with section 123 of the Act, must renegotiate the draft agreement to bring it into conformity with the requirements of the Act, or if this agreement is not renegotiated, the President must resubmit the agreement with an exemption of statutory requirements, whereupon the agreement must await affirmative action by Congress through the enactment of a joint resolution of approval before it comes into force." S. Con. Res. 96, 100th Cong., 1st Sess. (1988).

Atomic Energy Act, as amended, 42 U.S.C. § 2153, addresses agreements for cooperation, while section 131, 42 U.S.C. § 2160, regulates subsequent arrangements. The substantive requirements and procedures for the two also differ.

Subsection 123(a) prescribes nine requirements that must be included in agreements for cooperations. Of concern here are: subparagraph (5) which in pertinent part requires a guaranty by the cooperating party that any material transferred pursuant to the agreement for cooperation will not be transferred to unauthorized persons or beyond the jurisdiction or control of the cooperating party without the consent of the United States, and subparagraph (7) which, in pertinent part, requires a guaranty by the cooperating party that no material transferred pursuant to the agreement for cooperation will be reprocessed without the prior approval of the United States. 42 U.S.C. § 2153(a)(5) and (7).

Proposed agreements for cooperation are to be negotiated by the Secretary of State, with the technical assistance and concurrence of the Secretary of Energy, and in consultation with the Director of the Arms Control and Disarmament Agency. After subsequent consultation with the Nuclear Regulatory Commission (NRC), the proposed agreement is to be submitted to the President jointly by the Secretary of State and the Secretary of Energy, accompanied by the view and recommendations of the Secretary of State, the Secretary of Energy, the NRC and the Arms Control Disarmament Agency.10/ The Arms Control and Disarmament Agency must also provide the President an unclassified Nuclear Proliferation Assessment Statement (NPAS).

If the President wants to pursue the proposed agreement for cooperation, he is obliged to submit the text, with the accompanying NPAS, to the Senate Committee on Foreign Relations and the House Committee on Foreign Affairs, and to consult with both during a period of not less than 30 days of continuous session of the Congress on the consistency of the terms of the proposed agreement with the statutory requirements. Once the President has approved it and made a determination in writing that the agreement "will

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10/ These views were submitted to the cognizant congressional committees along with the text of the proposed Japanese agreement and accompanying documents. The Secretaries of Energy and State, as well as the Director of the Arms Control and Disarmament Agency, supported the Agreement. However, the NRC did not. One of the concerns expressed by the NRC was over the provisions for advance approval for plutonium use in future Japanese plutonium facilities.

promote and will not constitute an unreasonable risk to the common defense and security," he may authorize the execution of the agreement.11/ After this and the 30-day consultation period, depending on the nature of the proposed agreement for cooperation, it and the accompanying Presidential approval and determination, must lie before the House Committee on Foreign Affairs and the Senate Committee on Foreign Relations for a period of either 30 or 60 days of continuous session, before it becomes effective for the United States. If, as in the proposed Agreement, it is subject to a 60-day review period, the cognizant congressional committees are to hold hearings and submit a report to their respective bodies recommending whether the Agreement should be approved or disapproved. If the Agreement has not been exempted from any of the nine requirements, it shall not become effective during this period if the Congress adopts, and there is enacted, a joint resolution of disapproval. However, if the proposed Agreement has been exempted from one or more of the requirements, it will become effective only if the Congress adopts, and there is enacted, a joint resolution of approval.12/

11/ The President made this determination on October 28, 1987. See H.R. Doc. No. 128, supra, at p. 201.

12/ We recognize that the legislative history provides that the Congress "expects that the President will submit an exemption" to the Section 123 requirements if either of the cognizant congressional committees indicate that in their judgment such is required. In addition, the legislative history indicates that the Congress ". . . fully expects, . . . that the President will resubmit any agreement for which he has not submitted an exemption if either committee during the prior consultation period recommend that an exemption is required." See H.R. Rept. No. 180, 99th Cong. 1 Sess. 5154 (1985). However, these actions are not mandatory. Therefore, although the cognizant committees have expressed their belief that the proposed Agreement is outside the parameters of the requirements of Section 123, we would have to agree with the Congressional Research Service (CRS) assessment that:

> "barring a significant change in the administration's stance regarding compliance by the US-Japanese Agreement for Nuclear Cooperation with the AEA/NNPA requirements, it seems reasonable to conclude that nailing down a requirement for case by case approval or stopping the agreement's entry into force would require lawmaking." CRS study, January 25, 1988.

On the other hand, subsequent arrangements are under an agreement for cooperation and are entered into by the Secretary of Energy, with the concurrence of the Secretary of State, after consultation with the Arms Control and Disarmament Agency, the NRC and the Secretary of Defense.13/ Notice of any proposed subsequent arrangement is to be published in the Federal Register at least 15 days before it becomes effective, together with the written determination of the Secretary of Energy that the arrangement will not be inimical to the common defense and security. It is discretionary with the Arms Control and Disarmament Agency whether or not to prepare an NPAS.

In addition, if the subsequent arrangement is associated with reprocessing, the Secretary of Energy must provide the House Committee on Foreign Affairs and the Senate Committee on Foreign Relations with a report containing his reasons for entering into the arrangement, and a period of 15 days of continuous session must elapse before the subsequent arrangement can become effective.

Moreover, where the proposed subsequent arrangement authorizes reprocessing or a retransfer to a non-nuclear-weapon state of any plutonium resulting from reprocessing in quantities greater than 500 grams, the Secretaries of Energy and State must find that the reprocessing or retransfer will not result in a significant increase of the risk of proliferation beyond that which exists at the time that approval is requested.

> "Among all the factors in making this judgment, foremost consideration will be given to whether or not the . . . retransfer will take place under conditions that will ensure timely warning to the United States of any diversion well in advance of the time at which the non-nuclear-weapon state could transform the diverted material into a nuclear explosive device." 42 U.S.C. § 2160(b)(2).

It appears from the structure of the Act and its legislative history that the Congress contemplated that the broad framework of cooperation would be provided under a general

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13/ The Secretary of Defense has opposed the proposed Agreement.

agreement for cooperation with subsequent details and approvals implementing this agreement handled by the subsequent arrangement process. In particular, the Act required that the cooperating party guarantee as part of the agreement for cooperation that the United States have consent and prior approval over certain retransfer and reprocessing activities. As anticipated, these consents and approvals would be later evaluated under the substantive standards prescribed by the subsequent arrangement provision. However, there is no statutory provision in the Act which expressly limits approvals associated with reprocessing or retransfers to the subsequent arrangements process, or which specifically precludes the inclusion of advance, long-term approvals for these activities in the agreements for cooperation.

At the same time, we note that the practice prior to the enactment of the Non-Proliferation Act was for the United States Government to provide approvals, including approvals associated with reprocessing, on a request-by-request basis. The Non-Proliferation Act's addition of the separate section on subsequent arrangements, 42 U.S.C. § 2160, was an obvious attempt to continue but regularize this process. In addition, the substantial modifications by the Non-Proliferation Act to section 123 of the Atomic Energy Act governing agreements for cooperation, seem designed to buttress this process. 42 U.S.C. § 2153. The language prohibiting retransfers of material beyond the jurisdiction of the cooperating party "except as specified in the agreement" for cooperation was deleted. In its place, the Non-Proliferation Act added requirements that the agreement for cooperation contain guaranties by the cooperative party that no material would be retransferred beyond its jurisdiction or be reprocessed without United States approval, which approval rights were to be unqualified and set forth in the agreement unambiguously. One might extrapolate from these provisions that the approvals themselves were not to be included in an agreement for cooperation. Rather, it appears that an agreement was intended to provide the broad framework under which short-term arrangements would be reported and carried out. These short-term arrangements were to be processed as subsequent arrangements in accordance with the procedures and constraints of the new section governing such arrangements. Hence, as contemplated as well, the Congress would have continuous oversight over reprocessing and retransfer activities and an opportunity to act prior to an action being taken by the requesting country.

The Non-Proliferation Act also provided a mechanism for providing a cooperating party with broad authority for reprocessing activities. Subsection 131(a)(3) states that

the terms and conditions on which approvals for activities associated with reprocessing will be based may be included in the agreement for cooperation. 42 U.S.C § 2160(a)(3). However, in these situations, the actual approvals would still be provided through the subsequent arrangement process, but on an expedited basis.

Nevertheless, although it appears that the Congress anticipated that approvals for reprocessing and retransfer activities would be granted under the subsequent arrangement process and cover a definite amount of material over a specified period of time, we do not believe the evidence is sufficient to conclude, as a matter of law, that approvals associated with reprocessing cannot be included in an agreement for cooperation and must be granted only through the subsequent arrangement process. There is nothing in the law which specifies in which legal document the approvals must be placed. Nor does the statute specifically require a request-by-request review of each retransfer or instance of reprocessing.

However, it is clear that by providing for a separate section on subsequent arrangements and a requirement of prior approval and consent over reprocessing and retransfer activities, that the Act sought to provide:

> ". . . a formalized process of interagency review and consultation in order to insure that these decisions receive the thoughtful and systematic review they so obviously deserve." H.R. Rep. No. 587, supra. at 18.

Of particular concern and interest were the required findings and procedures explained above for United States approval of reprocessing and United States approval of the retransfer of the resulting plutonium.

This review process would be defeated if the Administration could by-pass the timely warning evaluation and make a proliferation risk determination by merely including blanket, long-term approvals for activities associated with reprocessing in the agreement for cooperation.

Therefore, we conclude that although approvals associated with reprocessing may be included in the agreement for cooperation rather than as subsequent arrangements, to achieve the Act's purpose if such approvals are included in an agreement for cooperation, the statutory requirements of both section 123 (dealing with agreements for cooperation) and section 131 (dealing with subsequent arrangements), must be satisfied.

In the Agreements for Cooperation with Sweden, Norway, and Finland, the United States provided long-term consent to transfer spent fuel from these non-nuclear-weapon countries to designated facilities in England and France. Both England and France are nuclear-weapon states. However, further approvals, including Congressional review under the subsequent arrangement process, would be necessary for the return of the resulting plutonium back to the non-nuclear-weapon state involved. Therefore, this advance approval was discrete and did not render meaningless the guaranties of consent and prior approvals required by the Act. The United States still maintains an oversight role with respect to future retransfer of plutonium and reprocessing within Sweden, Norway and Finland.

The Advance Approvals in the Proposed Agreement

On the other hand, the proposed Agreement purports to meet the requirements of Subsection 123(a)(5) and (7) by providing that the retransfer of nuclear material, etc. may occur "only to persons authorized by a receiving party or, if the parties agree, beyond the territorial jurisdiction of the receiving party" and that reprocessing may occur "if the parties agree." See Articles 3 and 5.1 of the proposed Agreement, Appendix II. The problem is that the agreement of the parties referenced in these two articles is provided in advance, by means of the Implementing Agreement submitted as part of the Agreement for Cooperation itself.

Therefore, as previously noted, the Implementing Agreement would provide Japan with the long-term consent of the United States that includes: (1) reprocessing within the territories of Japan; (2) storage of plutonium and spent fuel within the territories of Japan: (3) the retransfer of spent fuel from Japan to designated facilities in England and France and the subsequent return of resulting plutonium to Japan; and (4) the retransfer of unirradiated nuclear material to designated facilities in EURATOM and Norway for irradiation and the subsequent return of the resulting plutonium to Japan.

These are open-ended, blanket approvals and consents since they will last for the duration of the Agreement and apply in advance to facilities not yet in existence. Basically, under the terms of the proposed Agreement, the United States would agree to allow Japan to use United States-supplied nuclear material within the territory of Japan without any further approvals by the United States required. We believe this is directly at odds with the requirements of Section 123(a)(5) and (7).

We recognize that the approvals and consents provided by the Implementation Agreement are subject to a suspension provision. Under the suspension provision:

> "Either party may suspend the agreement it has given in Article I of this Implementing Agreement in whole or in part to prevent a significant increase in the risk of nuclear proliferation or in the threat to its national security caused by exceptional cases. . . . Any decision on such suspension would only be taken in the most extreme circumstance or exceptional concern from a non-proliferation or national security point of view, would be taken at the highest level of government, and would be applied only to the minimum extent and for the minimum period of time necessary to deal in a manner acceptable to the parties with the exceptional case.
>
> . . . . .
>
> ". . . The suspending party shall carefully consider the economic effects of such suspension and shall seek to the maximum extent possible to avoid the disruption of international nuclear trade and the fuel cycle operations under this Implementing Agreement. . . ." (Emphasis added.) (Implementing Agreement, Article 3, paras. 2 and 3).

The consent and prior approval guaranties required by the Act provide for the effective oversight of reprocessing and retransfer activities by allowing the imposition of the substantive standard of the subsequent arrangements process before the activities take place. The suspension provision, on the other hand, would only allow the United States to respond in the exceptional case if the approvals are not being properly implemented. Moreover, only the executive branch would be involved in this decision. Under the proposed Agreement, the United States would have no further input on the use of the United States-supplied nuclear material save for the notifications from Japan regarding the activities specified in Article 1 of the Implementing Agreement, including notification of each international transfer prior to shipment or as soon thereafter as possible. See Agreed Minutes to the Implementing Agreement, para. 1(a) and Note Verbale No. 329 contained in H.R. Doc. 128, supra, at pp. 58 and 169-186, and notification from Japan that additional reprocessing or storage facilities within Japan will be used. The subsequent arrangement process, however, contains a congressional lie-in-wait

provision which would not come into play under the terms of the agreement.14/

We do not believe that the Act intended that the subsequent decision-making of the United States would be based solely on the executive branch's assessment of the implementation of the activities authorized by a one-time blanket approval for reprocessing activities and the subsequent return of plutonium to a non-nuclear weapon state, such as Japan. Nor do we think that the Act intended that United States oversight and control over these important and significant activities would be limited to our ability to terminate or suspend an agreement under certain extreme conditions.

Accordingly, we do not believe the proposed Agreement sets forth the "unqualified and unambiguous" guaranties of consent and prior approval over retransfer and reprocessing activities required by subsections 123(a)(5) and (7).

14/ In this regard, we disagree with the statement in the NPAS that:

> " . . . Congressional review is not frustrated by setting forth advance consent for reprocessing or alteration of spent fuel in the proposed Agreement since section 123 permits Congress to review a new agreement for cooperation for up to ninety days, while section 131 provides that subsequent arrangements involving reprocessing or the retransfer of the plutonium in quantities greater than 500 grams must only lie before Congress for a 15 day period." H.R. Doc. 100-128, supra, at p. 228.

Although the statutory time period for congressional review of an agreement for cooperation (up to a total of 15 days) is substantially longer than the 15-day congressional review period for subsequent arrangements associated with reprocessing, the effect of a one-time approval can last as long as 30 years for an agreement for cooperation. Subsequent arrangements, on the other hand, generally provide approval on a request-by-request basis, offering more extensive opportunity for oversight and control over activities associated with reprocessing.

Timely Warning

You have asked that we examine the timely warning analysis provided by the Departments of Energy and State.15/

Under subsection 131(b)(2), in approving requests for reprocessing or the subsequent return of the resulting plutonium in quantities greater than 500 grams to a non-nuclear-weapon state, the Secretaries of State and Energy must determine that the approval "will not result in a significant increase of the risk of proliferation beyond that which exists at the time the approval is requested."

In making this judgment "foremost consideration will be given to whether or not the reprocessing or retransfer will take place under conditions that will ensure timely warning to the United States of any diversion well in advance of the time at which the non-nuclear-weapon state could transform the diverted material."16/ (Emphasis added.)

15/ Although the Departments of State and Energy consider the Implementing Agreement to be an integral part of the proposed Agreement, in view of the important commitments it entails and the fact that it would constitute a subsequent arrangement if submitted separate from the proposed agreement, these Departments sought to "ensure[] that [the approvals and consents provided therein would] meet[] all requirements for subsequent arrangements under the Act." H.R. Doc. 100-128, supra, at p. 259.

16/ Timely warning is the foremost factor in the proliferation risk determination. Other factors include:

-- whether the nation is firmly committed to effective non-proliferation policies and is genuinely willing to accept conditions which would minimize the risk of proliferation;

-- whether the nation has a security agreement or other important foreign policy relationship with the United States;

-- the nature and stability of the recipient's government;

-- the recipient's government's military and security position; and

(continued...)

The standard of timely warning applies explicitly to non-nuclear-weapon states because these countries have not previously been known to have detonated a nuclear explosive device. When reprocessing or the return of plutonium is authorized for a nuclear-weapon state, the country involved already has the capability and has detonated a nuclear explosive device. This element of unpredictability is removed from the evaluation in assessing increased risk. The only increase in risk would be that associated with the greater quantities of plutonium that the nuclear-weapon state would have to safeguard.

Although Japan is an advanced nuclear nation, it is a non-nuclear-weapon state. Therefore, the standards of the Act that apply to non-nuclear-weapon states must be applied to Japan. The Departments of State and Energy purported to apply the standards of section 131(b)(2) to the approvals authorizing reprocessing and the return of plutonium to Japan. These Departments determined that the approvals provided by the proposed Agreement "will not result in a significant increase" of the risk of proliferation. This determination applies over the 30-year period of the Agreement.

In considering timely warning, the Departments of State and Energy's analysis provided:

> "The law is silent as to what specific information must be taken into account in considering, and determining whether the 'timely warning' requirement is met. In view of the prominence accorded timely warning in the law, it is clear that a broad range of technical, political, and other factors, including, but not limited to, safeguards and physical protection, can be relevant in detecting diversion, and should be considered." H.R. Doc. 100-128, supra, at p. 369.

The Departments of State and Energy's analysis considered the following factors in their timely warning evaluation:

- Japan's research, development and production programs' relevant capabilities
- Japan's industrial capabilities
- Japan's scientific and technical capabilities

16/(...continued)
-- the energy resources available to the cooperation party. S. Rept. No. 467, supra, at p. 12.

. The availability of special nuclear material in Japan, and

. Indicators of diversion-relevant activities including:

-- safeguards

-- nuclear explosive-related indicators (i.e. moblization of dedicated resources and their organization)

-- political and economic trade indicators. H.R. Doc. 100-128, supra, at pp. 369-386.

The analysis concluded that Japan is a technologically advanced country that has or could obtain a large part of the required technology, facilities, and equipment necessary to produce components for a nuclear explosive device. In addition, the analysis acknowledges that Japan has acquired sufficient special nuclear material to produce a nuclear explosive device, should it choose to do so. Clearly, from a strictly technical basis, Japan can hardly be distinguished from a nuclear-weapon state. However, the analysis contends that, if Japan were to change its policies and attempt to make an explosive device, it would require the redirecting of key personnel and the acquisition of unique equipment and production facilities not available from Japanese domestic sources. These actions would provide the United States with prior warning of a shift in Japan's nuclear policies to give the United States time to adequately respond. Further, the analysis states that the safeguards and other indicators of diversion-relevant activities would provide numerous "windows" on the program that would provide the United States with timely warning.

Although timely warning was not specifically defined in the Act, the Senate Report stated:

". . . the standard of timely warning . . . is strictly a measure of whether warning of a diversion will be received far enough in advance of the time when the recipient could transform the diverted material into an explosive device to permit an adequate diplomatic response." S. Rept. No. 467, supra, at p. 11.

Neither the Act nor its legislative history strictly confine timely warning to a technical assessment. However, political and economic factors may be relied on only to the extent they contribute to intelligence information that would enable the executive branch to become aware of plans

for a possible diversion for nuclear materials prior to the diversion occurring or to the extent they could affect the timeliness of an adequate diplomatic response.

These factors cannot be used to avoid performing the technical assessment of the capability and proficiency of a recipient country to convert diverted material into a nuclear explosive device. This technical assessment of conversion time is crucial to the timely warning determination.17/ Timely warning is present only if the United States could effectively respond to a diversion before a recipient country could successfully convert diverted material into a nuclear explosive device.

It has been argued that the timely warning standard can only be applied on a request-by-request basis. However, the Act does not specifically require such a review. Nevertheless, the legislative history does provide that the timely warning standard was to be applied in an effective and systematic manner. Therefore, while a request-by-request review is not specifically mandated, the timely warning evaluation must be more than a projection of future events.

Although we think it is possible to make the necessary proliferation risk determination and timely warning judgment when the advance approval is limited to the retransfer of spent fuel for reprocessing to facilities in nuclear weapon states, we think it becomes particularly difficult to apply these substantive standards if the advance approvals involve reprocessing in or retransfer of plutonium to a non-nuclear-weapon state, such as Japan. In our view, it cannot be asserted with any degree of confidence that, over a 30-year period, technical capabilities of a cooperating party, anticipated conversion times, safeguard capabilities, United States political relationships with the cooperating party, etc. would all be such as to assure the existence of timely warning at all times or even ensure there would be no increase in proliferation risks over the 30-year period. This is even more so here, where the approvals are so broad

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17/ Conversion time includes consideration of such things as the amount, type, form and location of the diverted material, the facilities available to convert the material to weapon usable from and to assemble a nuclear explosive device, and the availability of personnel and other scientific and technical resources to design, test and manufacture the components of a nuclear explosive device.

and open-ended.18/ Accordingly, we do not think that the substantive standards can be applied to the blanket approvals at issue here.

CONCLUSION

We have concluded that the requirements of subsections 123(a)(5) and (7) are not met and the standard of timely warning cannot be achieved when applied to the broad, open-ended, blanket approvals that would be provided under the proposed Agreement.

According to the analysis of the Departments of State and Energy:

> "The implementing agreement provides to Japan advance, long-term consent for specified reprocessing, transfers, alteration and storage of nuclear material subject to the agreement for cooperation, but only where the reprocessing and subsequent use of the recovered plutonium meet and continue to meet the criteria set out in U.S. law, including criteria relating to safeguards and physical protection. . . ." H.R. Doc. 128, supra, at pp. 258-259. (Emphasis added.)

As we previously stated, we do not believe the Act intended that the subsequent decision-making or oversight of the United States would be based on the executive branch's assessment of the implementation of the activities authorized by a one-time blanket approval for reprocessing activities and the subsequent return of plutonium to a non-nuclear-weapon state. Nor did the Act intend that United States oversight would be limited to our ability to terminate or suspend an agreement under certain extreme conditions.

Rather, we think that the Act anticipated effective United States control over reprocessing and retransfer activities that include an oversight role for both the Congress and the public.

18/ The consents and approvals provided by the Implementing Agreement would last the life of the Agreement. They apply to facilities within Japan not yet in existence and for which no safeguard concept has been developed. In addition the transfer back of plutonium from England and France would be over a yet undecided route. The plutonium itself will be shipped in casks that have not been designed and must before being used be certified to be crash-worthy.

As stated above, if the subsequent arrangement is associated with reprocessing, the Secretary of Energy must provide the cognizant congressional committees with a report containing his reason for entering into the arrangement, and a period of 15 days of continuous session must elapse before the arrangement can become effective.19/ If the subsequent arrangement involves reprocessing or the subsequent return of significant quantities of plutonium to a non-nuclear-weapon state, the report must include a proliferation risk determination and timely warning analysis.

The Secretary must also publish notice of any proposed subsequent arrangement at least 15 days before it becomes effective in the Federal Register along with his written determination that the arrangement will not be inimical to the common defense and security.20/

Under the proposed Agreement, the United States control over reprocessing within Japan and the subsequent return to Japan of significant quantities of plutonium is limited to the executive branch's monitoring of the implementation of these activities authorized in the Implementing Agreement. Based on that monitoring, the Agreement could be terminated or the Implementing Agreement suspended but only in the extreme

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19/ The President can shorten the review period to 15 calendar days if he finds an emergency exists due to unforeseen circumstances requiring immediate entry into a subsequent arrangement.

20/ We note that the Secretary of Energy does not plan to publish in the Federal Register the notice or determinations regarding the consents and approvals provided by the proposed Agreement. It is believed by the Departments of Energy and State that:

> "The requirement for public notice of proposed subsequent arrangements through publication in the Federal Register, . . . will be satisfied by publication in the Congressional Record of the Presidential transmittal of the proposed Agreement for Cooperation and by the publication as a House document of the Agreement along with all related documents." H.R. Doc. 100-128, supra, at p. 305.

We disagree. We do not think publication as a House document or in the Congressional Record satisfy a statutory requirement of publication in the Federal Register. The primary audience of the latter is the public in general and not just the Congress.

case. The Congress has no further oversight role and neither the public or the Congress receive further notice of how the activities are being implemented.

We recognize the need to be able to provide nuclear advanced nations that are close allies, such as Japan, with predictable, long-term, reliable use of the nuclear materials we provide. However, this need has to be balanced with our proliferation concerns and controls required by the Act.

We note that the Act does provide for a type of generic or programmatic approval process. Under subsection 131(a)(3), the terms and conditions necessary for approvals associated with reprocessing can be included in the Agreement for Cooperation. However, the actual approval is still provided under the subsequent arrangement process, but on an expedited basis.

In this context, we disagree with the statement in the NPAS that:

> ". . . There is no substantive difference between [a commitment in an agreement for cooperation to approve reprocessing or retransfer for reprocessing under specified conditions] and the proposed Agreement which makes the approval for reprocessing and alteration granted in the Implementing Agreement contingent upon the continued compliance with those same conditions." H.R.Doc. 128, supra, at p. 227.

The procedures specified in the former, are of course, contemplated by subsection 131(a)(3) of the Act, but thereunder, congressional review may occur on a request-by-request basis under the subsequent arrangement process. In the procedure presented by the latter, subsequent decision-making on the implementation or suspension of the approvals in the Agreement for Cooperation lies with the executive branch alone, with no necessary notification or participation by the Congress or the public.

We think it is more in keeping with the purpose and intent of the Act to use the subsection 131(a)(3) mechanism when providing a non-nuclear-weapon cooperating party, such as Japan, with broad authority to use United States-supplied nuclear materials in activities associated with reprocessing.

APPENDIX I - PERTINENT SECTIONS OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED

42 U.S.C. § 2153(a)(5)

"a guaranty by the cooperating party that any material or any Restricted Data transferred pursuant to the agreement for cooperation and, except in the case of agreements arranged pursuant to section 2121(c), 2164(b), or 2164(c) of this title, any production or utilization facility transferred pursuant to the agreement for cooperation or any special nuclear material produced through the use of any such facility or through the use of any material transferred pursuant to the agreement, will not be transferred to unauthorized persons or beyond the jurisdiction or control of the cooperating party without the consent of the United States;"

42 U.S.C. § 2153(a)(7)

"except in the case of agreements for cooperation arranged pursuant to section 2121(c), 2164(b), or 2164(c) of this title, a guaranty by the cooperating party that no material transferred pursuant to the agreement for cooperation and no material used in or produced through the use of any material, production facility, or utilization facility transferred pursuant to the agreement for cooperation will be reprocessed, enriched or (in the case of plutonium, uranium 233, or uranium enriched to greater than twenty percent in the isotope 235, or other nuclear materials which have been irradiated) otherwise altered in form or content without the prior approval of the United States;"

42 U.S.C. § 2160(b)(2)

"the Secretary of Energy may not enter into any subsequent arrangement for the reprocessing of any such material in a facility which has not processed power reactor fuel assemblies or been the subject of a subsequent arrangement thereof prior to March 10, 1978, or for subsequent retransfer to a non-nuclear-weapon state of any plutonium in quantities greater than 500 grams resulting from such reprocessing, unless in his judgment, and that of the Secretary of State, such reprocessing or retransfer will not result in a significant increase of the risk of proliferation beyond that which exists at the time

that approval is requested. Among all the factors in making this judgment, foremost consideration will be given to whether or not the reprocessing or retransfer will take place under conditions that will ensure timely warning to the United States of any diversion well in advance of the time at which the non-nuclear-weapon state could transform the diverted material into a nuclear explosive device;"

42 U.S.C. § 2160(a)(3)

"The United States will give timely consideration to all requests for prior approval, when required by this chapter, for the reprocessing of material proposed to be exported, previously exported and subject to the applicable agreement for cooperation, or special nuclear material produced through the use of such material or a production or utilization facility transferred pursuant to such agreement for cooperation, or to the altering of irradiated fuel elements containing such material, and additionally, to the maximum extent feasible, will attempt to expedite such consideration when the terms and conditions for such actions are set forth in such agreement for cooperation or in some other international agreement executed by the United States and subject to congressional review procedures comparable to those set forth in section 2153 of this title."

APPENDIX II - PERTINENT SECTIONS OF THE PROPOSED JAPANESE AGREEMENT

Article 3 - Storage

Plutonium and uranium-233 (except as contained in irradiated fuel elements), and high enriched uranium, transferred pursuant to this Agreement and special fissionable material produced through the use of such material, nuclear material or equipment may be transferred only to persons authorized by a receiving party or, if the parties agree, beyond the territorial jurisdiction of the receiving party.

Article 4 - Retransfer

Material, nuclear material, equipment and components transferred pursuant to this Agreement and special fissionable material produced through the use of such material, nuclear material or equipment may be transferred only to persons authorized by a receiving party or, if the parties agree, beyond the territorial jurisdiction of the receiving party.

Article 5 - Reprocessing and Alteration

1. Nuclear material transferred pursuant to this Agreement and special fissionable material used in or produced through the use of material, nuclear material or equipment so transferred may be reprocessed if the parties agree.

2. Plutonium, uranium-223, high enriched uranium and irradiated nuclear material transferred pursuant to this Agreement or used in or produced through the use of material, nuclear material or equipment so transferred may be altered in form or content by irradiation. Such special fissionable material may otherwise be altered in form or content if the parties agree.

Article 11 - Mutual Agreements Necessary to Satisfy the Requirements of Articles 3, 4 & 5.

In order to facilitate activities subject to Articles 3, 4 and 5 of this Agreement, the parties shall make,

consistent with the objective of preventing nuclear proliferation and with their respective national security interests, and perform in good faith separate arrangements that will satisfy the requirements for mutual agreement set forth in those Articles on a long-term, predictable and reliable basis, and in a manner that will further facilitate peaceful uses of nuclear energy in their respective countries.

Article 12 - Termination

1. If either party at any time following entry into force of this Agreement:

(a) does not comply with the provisions of Articles 3, 4, 5, 6, 7, 8, 9, or 11 of this Agreement or the decisions of the arbitral tribunal referred to in Article 14 of this Agreement; or

(b) terminates or materially violates a safeguards agreement with the Agency, the other party shall have the right to cease further cooperation under this Agreement, terminate this Agreement and require the return of any material, nuclear material, equipment or components transferred pursuant to this Agreement or any special fissionable material produced through the use of such items.

2. If the United States of America detonates a nuclear explosive device using material, nuclear material, equipment or components transferred pursuant to this Agreement, or nuclear material used in or produced through the use of such items, the Government of Japan shall have the same rights as specified in paragraph 1 of this Article.

3. If Japan detonates a nuclear explosive device, the Government of the United States of America shall have the same rights as specified in paragraph 1 of this Article.

4. Before either party takes steps to cease cooperation under this Agreement, to terminate this Agreement, or to require such return, the parties shall consult for the purpose of taking corrective steps and shall carefully consider the economic effects of such actions, taking into account the need to make such other appropriate arrangements as may be required.

5. If either party exercises its rights under this Article to require the return of any material, nuclear material, equipment or components, it shall compensate the other party or the persons concerned for the fair market value thereof.

APPENDIX III - IMPLEMENTING AGREEMENT

Implementing Agreement Between the Government of the United States of America and the Government of Japan Pursuant to Article 11 Cooperation Concerning Peaceful Uses of Nuclear Energy

WHEREAS the Government of the United States of America and the Government of Japan (hereinafter referred to as "the parties") signed the Agreement for Cooperation Concerning Peaceful Uses of Nuclear Energy on November 4, 1987 (hereinafter referred to as "the Agreement for Cooperation");

WHEREAS Article 3 of the Agreement for Cooperation provides requirements for the storage of certain special fissionable material;

WHEREAS Article 4 of the Agreement for Cooperation provides requirements for the reprocessing of certain nuclear material and for the alteration in form or content of certain special fissionable material;

WHEREAS Article 11 of the Agreement for Cooperation provides that to facilitate the peaceful uses of nuclear energy, the parties shall make, consistent with the objective of preventing nuclear proliferation and with their respective national security interests, and perform in good faith separate arrangements whereby the requirements for mutual agreement set forth in Articles 3, 4 and 5 will be satisfied on a long-term, predictable and reliable basis;

The parties, in fulfillment of Article 11 of the Agreement for Cooperation, have agreed as follows:

Article 1

1. (a) The parties hereby agree pursuant to Articles 3, 4 and 5 of the Agreement for Cooperation to the following activities:

(i) reprocessing or alteration in form or content in the facilities within the territorial jurisdiction of either party which are listed in Annex 1;

(ii) storage in the facilities within the territorial jurisdiction of either party which are listed in Annex 1 or 2; and

(iii) transfer beyond the territorial jurisdiction of either party of irradiated nuclear material, except irradiated high enriched uranium and uranium-223, from facilities listed in Annex 1, 2 or 3 to facilities listed in Annex 1.

(b) The parties hereby agree pursuant to Article 4 of the Agreement for Cooperation to the transfer beyond the territorial jurisdiction of either party of unirradiated source material and low enriched uranium to third countries designated in writing by the parties but not for the production of high enriched uranium.

2. (a) The parties hereby agree pursuant to Articles 3 and 5 of the Agreement for Cooperation to the following activities within each calendar year in each of the facilities within the territorial jurisdiction of either party designated in accordance with procedures agreed to by the parties:

(i) alteration in form or content of plutonium, uranium-233 and high enriched uranium in an aggregate quantity not to exceed 1 effective kilogram of these nuclear materials and of irradiated nuclear material containing plutonium, uranium-233 or high enriched uranium in an aggregate quantity not to exceed 1 effective kilogram of these nuclear materials;

(ii) storage of plutonium and uranium-233 (except as contained in irradiated fuel elements) and high enriched uranium in an aggregate quantity not to exceed 5 effective kilograms of these nuclear materials; and

(iii) reprocessing of irradiated nuclear material containing plutonium or uranium-233 in an aggregate quantity not to exceed 500 grams of these nuclear materials.

(b) The parties hereby agree pursuant to Article 4 of the Agreement for Cooperation to the transfer within each calendar year of unirradiated nuclear

material containing plutonium in quantities not to exceed 500 grams to each facility designated in writing by the parties within the territorial jurisdiction of a third country for irradiation and for its subsequent return to the territorial jurisdiction of the transferring party for testing and analysis. The transfer of unirradiated nuclear material shall take place in quantities not to exceed 500 grams of contained plutonium per shipment.

3. (a) Each party shall keep the government of a third country informed of the facilities within the territorial jurisdiction of that government which are designated pursuant to subparagraph (b) of paragraph 2 of this Article. Each party shall give the government of the third country its consent if required under its agreement with that government to:

(i) reprocessing, alteration in form or content and storage (in the case of facilities listed in Annex 1) and irradiation (in the case of facilities designated pursuant to sub-paragraph (b) of paragraph 2);

(ii) return of the nuclear material concerned (except recovered plutonium) to the territorial jurisdiction of the other party; and

(iii) return of the recovered plutonium concerned in quantities of two kilograms or more per shipment to the territorial jurisdiction of the other party in accordance with the following procedure: prior to each shipment the receiving party will provide the other party a written notification which shall include a statement advising that the measures arranged for the international transport are in accordance with the guidelines set forth in Annex 5 and a description of such measures.

(b) When the procedure set forth in sub-paragraph (a)(iii) above is not to be followed, the return of the recovered plutonium may only take place upon consent of the non-receiving party under the applicable agreement.

4. Sub-paragraph (a) of paragraph 1 and paragraphs 2 and 3 above shall apply only where the recovered plutonium concerned is or will be located in a facility listed in Annex 1 or 2 designated pursuant to paragraph 2 of this Article, unless otherwise accepted in writing by the parties.

5. The additional procedural conditions for this Implementing Agreement are set forth in the Agreed Minutes to this Implementing Agreement.

Article 2

1. Annexes 1, 2, 3, and 4 of this Implementing agreement may be modified in accordance with the procedures set forth in this Article and Annex 5 of this Implementing Agreement may be modified by agreement of the parties, without amendment of this Implementing Agreement.

2. Unless otherwise agreed by the parties, either party may add to or delete from Annex 1, 2, 3, or 4 a facility within its territorial jurisdiction only after notifying the other party in writing in accordance with the provisions of this Article and receiving a written acknowledgment which shall be limited to a statement that such notification has been received. Such acknowledgment shall be given no later than 30 days after the receipt of the notification.

(a) For an addition to Annex 1 or 2 of a facility listed in Annex 3 or 4, the notification shall contain:

(i) the name of the owner or operator of the facility, the facility name and the existing or planned capacity;

(ii) the facility location, the type of nuclear material involved, the approximate date of introduction of such nuclear material into the facility and the type of activity; and

(iii) a statement that a relevant safeguards arrangement (namely, a facility attachment or, in the case of ad hoc inspection, an arrangement therefor) has been agreed upon with the International Atomic Energy Agency (hereinafter referred to as "the Agency") and that physical protection measures as required by Article 7 of the Agreement for Cooperation will be maintained;

(b) In addition to the information specified in sub-paragraph (a) above, the notification shall contain the following information:

(i) For an addition to Annex 1 of a facility listed in Annex 4, except where sub-paragraph (b)(ii) is applicable, a statement affirming that the safeguards arrangement is in accordance with the relevant safeguards concept that has been agreed upon between the parties and a description of the key elements contained in the safeguards arrangement.

(ii) For an addition to Annex 1 of a facility listed in Annex 4, when safeguards applicable to that facility are already being applied at an Annex 1 facility within the territorial jurisdiction of the notifying party, a statement affirming that the safeguards arrangement will be in all significant respects the same as that being applied at the corresponding facility listed in Annex 1 and a description of the key elements contained in the safeguards arrangement.

(c) To delete a facility from Annex 1, 2, 3 or 4 or to add a facility to Annex 3 or 4, the notification shall contain the facility name and other relevant information available.

3. A facility within the territorial jurisdiction of the government of a third country may be added to or deleted from Annex 1 by agreement of the parties.

4. (a) When circumstances so require, the parties shall seek to develop as soon as possible a safeguards concept for a facility which is or will be listed in Annex 4 to avoid delaying its operation.

(b) When the Agency cannot administer safeguards in accordance with the safeguards concept that has been agreed upon between the parties with respect to a facility then listed in Annex 4, the parties shall make every effort to ensure that this does not delay the operation of the facility. For this purpose, consultations shall take place between the parties or between either party and the Agency. The facility shall be added to Annex 1 pursuant to sub-paragraph 9(a) of paragraph 2 above on a provisional basis provided that the parties are satisfied that adequate safeguards of the Agency will be applied in the interim. The parties shall make every effort to modify, as may be necessary, the relevant safeguards concept to enable the Agency to administer safeguards in accordance therewith.

Article 3

1. This Implementing Agreement shall enter into force at the same time as the Agreement for Cooperation and shall remain in force in accordance with Article 11 of the Agreement for Cooperation for the same duration. The parties shall, at the request of either of them, consult with each other whether to amend this Implementing Agreement or to replace it with a new agreement.

2. Either party may suspend the agreement it has given in Article 1 of this Implementing Agreement in whole or in part to prevent a significant increase in the risk of nuclear proliferation or in the threat to its national security caused by exceptional cases such as a material breach by the other party of the Treaty on the Non-Proliferation of Nuclear Weapons or withdrawal therefrom, or a material breach by the other party of its safeguards agreement with the Agency, of this Implementing Agreement or of the Agreement for Cooperation. Any decision on such suspension would only be taken in the most extreme circumstances of exceptional concern from a non-proliferation or national security point of view, would be taken at the highest levels of government, and would be applied only to the minimum extent and for the minimum period of time necessary to deal in a manner acceptable to the parties with the exceptional case.

3. During the period of suspension the parties may agree on a case-by-case basis to the activities specified in Article 1 of this Implementing Agreement. Prior to any suspension, the parties shall consult with each other to determine the facts of the matter and to discuss to what extent, if at all, a suspension is necessary. The suspending party shall carefully consider the economic effects of such suspension and shall seek to the maximum extent possible to avoid the disruption of international nuclear trade and the fuel cycle operations under this Implementing Agreement. The parties may agree in accordance with Article 14 of the Agreement for Cooperation to refer any of these questions to a third party for resolution.

4. The suspending party shall keep under constant review the development of the situation which caused the suspension and shall withdraw the suspension as

soon as warranted. The parties shall, at the request of either of them, consult with each other immediately to determine whether there is a basis for the withdrawal of such suspension.