

**September 16, 1980**  
**Letter, Gerard C. Smith to Atsuhiko Yatabe, with  
Enclosed Memoranda**

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**Summary:**

The memorandum describing Ambassador Smith's thinking about an improved nonproliferation regime to Director General Yatabe.

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English

**Contents:**

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DEPARTMENT OF STATE  
AMBASSADOR AT LARGE  
FOR JAPAN

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RELEASED IN FULL

*File Japan*

September 16, 1980

Dear Mr. Yatabe:

As we agreed in our meeting on July 30, I am sending herewith, on an informal basis, an outline of the ideas I am exploring with a small number of governments, and an additional informal discussion paper on the specific issue of approvals for reprocessing and use of plutonium.

As you know, I have been authorized to explore these ideas on a personal, non-committal, and confidential basis. It would be my hope that, ad referendum, we could together define the essential elements of our future nuclear cooperation, on the basis of which we could make realistic recommendations to our respective governments.

I would welcome your comments or questions on these ideas, and on whether you believe this approach offers a promising basis for further, in-depth discussions.

Sincerely,

*Gerard Smith*  
Gerard Smith

Enclosures:

His Excellency  
Atsuhiko Yatabe  
Director-General for Scientific and Technological  
Affairs, Ministry of Foreign Affairs of Japan  
Tokyo, Japan

UNITED STATES DEPARTMENT OF STATE  
REVIEW AUTHORITY: WILLIAM J GEHRON  
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We have common interests in both optimal use of nuclear power and minimization of proliferation risks. We have made some progress; but much work remains in harmonizing policies and removing sources of friction, and strengthening the non-proliferation regime.

A post INFCE "understanding" could be founded on three basic elements:

- (a) respect for one another's views on the best use of nuclear power, even though differing national circumstances may lead to differing views on, for example, the urgency of the breeder and other advanced reactor systems.
- (b) greater confidence and predictability of nuclear supply and retransfer authorizations;
- (c) a closer identity of views on how to improve the non-proliferation regime including approaches to be taken to acquisition, use and export of weapons-usable materials and sensitive technologies.

The last two elements are linked. Progress in one is likely to be influenced by progress in the other. I believe that our ability to restore confidence in nuclear trade relationships will be directly influenced by the degree to which we can harmonize our overall nuclear policies. This harmonization should be achievable.

We appreciate that major trading partners of the U.S. need greater predictability, confidence, and timeliness in the process by which U.S. approvals are given for fuel supplies and approvals for retransfers. We have mutual interest in improved "front end"

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assurances covering exports of low enriched uranium so that importers with good credentials can count on long-term supply. I also see a need for greater predictability of conditions under which the U.S. would approve (a) retransfers for reprocessing where the US has approval rights; (b) indigenous reprocessing where we have such rights; and (c) the storage, fabrication, and use and reuse of plutonium recovered from such reprocessing.

With greater harmonization of our policies and improvement of the non-proliferation regime, the U.S. might be able to move away from just granting case-by-case approvals for reprocessing and plutonium use under specific implementing conditions. We might be able to grant countries advance approvals to have spent fuel reprocessed in France and the UK. This advantage would be available to countries that have good non-proliferation credentials, or where the spent fuel is subject to pre-1977 contracts or there are no spent fuel storage alternatives or where there are non-proliferation reasons.

We might be prepared also to agree in advance to reprocessing of materials over which the US has consent rights in mutually agreed facilities and use of the separated plutonium and subsequent generations of such plutonium in agreed breeder and advanced reactor RD&D programs in advanced NPT countries with good non-proliferation credentials, advanced nuclear programs, and large electric grids. A discussion paper setting forth more detailed thoughts on this matter is appended.

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With regard to related elements of the non-proliferation consensus, we see two sets of issues: those generally relevant to strengthening the international non-proliferation regime, and those specifically related to the phasing and timing of reprocessing and plutonium use.

Important elements of a new consensus on general non-proliferation improvements would include among others:

1. agreement to condition significant new nuclear supply commitments on the recipient country's commitment to have IAEA safeguards on all its future, as well as existing, facilities.
2. agreement to provide greater commitments of financial and technical resources as well as political support for development and implementation of improved IAEA safeguards, and to ensure that plants are designed to facilitate effective safeguards.
3. agreement that any future enrichment plants should be designed and dedicated exclusively for low-enriched uranium.
4. more effective cooperation in dealing with countries of proliferation concern, including effective restraints on exports of sensitive technologies and materials to such countries.

So that nations might avoid premature production and stockpiling of excess quantities of weapons-usable materials, we should seek agreement on the following principles:

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1. For the next 10-15 years, reprocessing capacity and plutonium use should be limited to breeder and advanced reactor programs, and commercialization of thermal recycle should be deferred. We would hope for understandings that cooperating countries do not contemplate further moves to commercial recycle, although we recognize that some may want to preserve the option for exercise at a later date.
2. New reprocessing capacity should be limited to that required for breeder and advanced reactors.
3. Separation of plutonium should be scheduled so as to avoid unnecessary stockpiling and pressure for thermal recycle.
4. Reprocessing for breeder programs should incorporate available proliferation resistance features.
5. We should cooperate more closely in improving the utilization of fuel in light water reactors and in increasing spent fuel storage capacity.
6. We should continue our efforts to work towards an effective IPS system. While a rigorous IPS system might facilitate the application of national consent rights, we do not as a practical matter, expect suppliers to relinquish such rights. We propose that bilateral agreements on the exercise of such rights should underpin the IPS system.

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CONFIDENTIALINFORMAL DISCUSSION PAPERA POSSIBLE APPROACH FOR PROVIDING LONGER-RANGE U.S. APPROVALS  
FOR RETRANSFERS AND REPROCESSING ACTIVITIES GEARED TO DEFINED  
BREEDER AND ADVANCED REACTOR NEEDS

1. Nations engaged in breeder research and development or work on advanced reactor fuel cycle systems wish to obtain greater and more predictable assurances that the materials they require for these programs will be available on a timely basis. At the same time, nations should avoid the separation of plutonium earlier than required for specific national programs and installation of any new reprocessing capacity beyond established breeder and advanced reactor needs. However, since precise estimates of plutonium needs may be difficult to formulate well in advance of anticipated programs, even with periodic review and update of projections, some stocks of excess separated plutonium may be produced. For this reason, several nations and the IAEA are giving serious attention to establishing an international plutonium storage regime to control plutonium stockpiling.
2. Against this background, the following are some preliminary observations as to how longer range approvals might be granted for the reprocessing and/or retransfers which would be required to make available US-controlled plutonium for breeder and advanced reactor research and development. A program and plan for granting such approvals could be developed by the U.S. and a cooperating nation or nations. In connection with the appropriate Agreement for Cooperation, a special minute or annex could reflect understandings of the parties on various key issues, including how rights

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of approval of reprocessing, retransfers and plutonium storage and use as set forth in the Agreement would be exercised. In contrast to the current case-by-case mode of U.S. approvals, the United States and the cooperating country could agree on specific programs and projects to be covered by longer-range programmatic approvals and on conditions for granting such approvals. The basic concept would be to review the using nation's anticipated breeder and advanced reactor needs over a stipulated period, to endorse in principle use of US-controlled plutonium and of subsequent generations of that plutonium in specific projects, and to agree on a periodic review of needs to keep the original understanding up-to-date and provide long range predictability as program needs might change over time.

3. For illustrative purposes, this approach might operate along the following lines. In the initial negotiations, and if desired annually thereafter, we would review with the other party:

- o its projected needs for plutonium for breeder and advanced reactor programs under construction or in operation and for those planned for initiation in the following ten years as part of an official program approved by the government of the party concerned.
  
- o the projected availability of separated plutonium to meet such scheduled needs, identifying the primary sources of such plutonium including any

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separated indigenously and any to be imported from other countries;

- o the facilities in which any such plutonium was proposed to be separated, fabricated or stored, including whether the best available safeguards measures and other appropriate proliferation resistance measures were in application at such facilities. Use of new reprocessing capacity would also bear an appropriate relationship to the outcome of the review of needs and supply.

On the basis of such initial or subsequent review, we would reach agreement on the reactors in which plutonium from US-origin or controlled fuel would be used, and the schedule of such use, taking into account the availability from other sources. Once it was agreed that U.S. controlled plutonium was needed for a reactor project or activity, the U.S. would expect to approve on a timely basis any necessary retransfers or reprocessing that were subject to U.S. consent rights. With respect to reprocessing, it is assumed that the parties would be satisfied that adequate safeguards were being applied to the activities involved and, as noted, one would expect reprocessing facilities to incorporate up to date advances in non-proliferation technologies as feasible and appropriate.

Periodic reviews of the cooperating nation's needs would enable both parties to have a clear picture of the program and related plutonium needs for the following ten years. This would permit the up-dating of previous reviews by adjustments in schedules and

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the specific reactors or programs covered. Once a reactor or a program had been listed it would remain on the approved list unless it was not completed, or was cancelled, but delivery and related other schedules would be adjusted if required.

When applications for specific "subsequent arrangements" of the type covered by Section 131(b) of the Atomic Energy Act were made, the applicant would certify that the end use was for a reactor specified in the agreed program, that the shipment was consistent with the agreed schedule of needs, and that no major changes had occurred either in that schedule or in the availability of plutonium from other sources. On this basis, the consent would be granted promptly in accordance with our law.

In the event any excess plutonium were produced in the reprocessing facility involved, it would be stored pending use in an agreed IPS or equally effective regime. Pending agreement on a broadly based IPS, the U.S. and the other affected states would establish specific release criteria and physical constraints that should govern returns of plutonium from excess stores to near term actual use.

The U.S. would look to the cooperating country to define its needs and requirements. We would not have in mind interposing our judgments as to whether a breeder or research program was economically justified. We recognize that uncertainties in some programs may oblige us in some cases to agree only on a provisional basis to use of plutonium over which the U.S. has consent rights, with the understanding that precise requirements will become more apparent with the passage of time.

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