

**July 30, 1980**  
**Memorandum of conversation, 'Post-INFCE  
Explorations'**

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**Summary:**

The memorandum describes Ambassador Smith's meeting with Director General Yatabe regarding reprocessing of US origin materials and second reprocessing plant.

**Original Language:**

English

**Contents:**

Original Scan

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DEPARTMENT OF STATE

Washington, D.C. 20520

MEMORANDUM OF CONVERSATIONPARTICIPANTS:Japan

Director General Yatabe  
Mr. Togo  
Mr. Kurihara

United States

Ambassador Gerard Smith  
Charles Van Doren, ACDA  
Harold Bengelsdorf, DOE  
Barbara Schrage, OES  
Frank Hodson, S/AS  
Allen Locke, S/AS

DATE AND PLACE: July 30, 1980, 2:30 p.m., Office of Ambassador Smith

SUBJECT: Post-INFCE Explorations

SUMMARY:

Ambassador Smith opened the discussion and stressed that Japan and Western Europe were our key partners. He made clear he was continuing his personal and confidential post-INFCE explorations and that no US policy decisions had been made. He said he had been authorized to explore (without commitment) programmatic approvals of reprocessing and plutonium use as a basis for the US/Japan and US/EURATOM renegotiations. Smith reviewed needed improvements in the nonproliferation regime (with particular emphasis on full-scope safeguards (FSS), an understanding regarding deferring thermal recycle, new reprocessing capacity being phased to plutonium needs, and better supplier state cooperation regarding the problem countries). Smith stressed that progress on these would be needed to enable increased predictability in supply and retransfer relationships.

It was agreed that the US and Japan would have a bilateral in the margins of the IAEA general conference in Vienna in September. Smith said we would try to put our approach in writing. There also appeared to be agreement that the September meeting should include an exchange on Japanese projected plutonium supply and demand.

Yatabe said he would be more precise in September, but he had two personal reactions at this time:

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- He may have been "a little optimistic" in earlier conversations regarding Japan not using plutonium for thermal recycle. Breeder commercialization would be difficult; the second Japanese reprocessing plant had to be pursued; and Japan may need to have a thermal cycle option (utilities not interested, but GOJ might be).
- There will be excess plutonium for some period which will need to be stored. Given difficulties in IAEA International Plutonium Storage (IPS) study, a global IPS may not be available. Should one consider a plutonium storage regime agreed in bilaterals involving the US, France, UK, FRG and Japan?

Yatabe also made the following points:

- The French were eager for French technology to be used in the second Japanese reprocessing plant, but Japan has "not always been confident on French technology."
- Any Australian enrichment plant would have to be consistent with the Japanese enrichment program (due to provide by 1995 twenty percent of Japan's SWU needs). Yatabe thought the French were the most serious regarding Australian enrichment (to replace CORIDIF) and that URENCO's interest was to stop the French.

END SUMMARY

1. Ambassador Smith opened the meeting making the following points:
  - Japan is a key partner of the US which we need to treat on an equal basis with European countries.
  - The US appreciates the contributions Japan has made to strengthen nonproliferation objectives.
  - Smith has made recommendations to the President regarding post-INFCE and has authority to explore his approach on a confidential, noncommittal basis.
  - Japan will be interested in greater predictability regarding the exercise of US consent rights over reprocessing of US origin material and use of the derived plutonium. One of Smith's main objectives is to develop a programmatic procedure which would serve to restore greater confidence in supply

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relationships, effectively control plutonium and permit EURATOM to give US new prior consent rights. The UK and France appear to have no problem in principle, but there might be problems regarding specifics.

- Our approach towards Europe would be to permit in EURATOM reprocessing of US origin material for specified breeder projects, and in the Japanese case retransfers for reprocessing for specified breeder projects.
- Smith said he was not sure exactly how this approach would tie in with IPS, but that he felt an effective IPS would be important.
- US was considering in addition a number of supply assurance improvements regarding the front end: longer terms, fuel licensing and greater rationality in our HEU licensing (Smith noted current time consuming procedures with each case going to White House for approval). White House has not yet approved these improvements, but prospects are good.
- White House could go in this direction, but only if this were a part of modernizing nonproliferation regime, including:
  - FSS for significant new commitments.
  - An appropriate understanding regarding deferring thermal recycle.
  - A better approach to dealing with problem countries (this is vital; US has concentrated in past too much on friends as opposed to problem countries).
  - New enrichment plants should be designed and dedicated to low enrichment.
  - New reprocessing should be phased to specified plutonium needs.
  - The quality of safeguards should be improved.

2. Van Doren added that we were also proposing better cooperation on spent fuel storage and increasing the efficiencies of fuel utilization in light water reactors. He noted that IPS clearly would have to be effective and more than a facade.

3. Smith said that our approach would be to designate particular programs such as Super Phenix I, II and III in France as beneficiaries of programmatic approvals related to reprocessing and plutonium flows. He noted the UK was concerned because its breeder program might not

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go forward. Smith repeated he was not clear on the relationship between bilateral agreements and the multilateral IPS. He hoped for ideas on all of these issues, and suggested consultation in the corridors in Vienna at the time of the IAEA General Conference.

4. Yatabe responded by stating he appreciated the/ flexibility and our wish to be more predictable. He said that the "impediments" we had mentioned were relevant and he hoped his reactions could be more precise in September. In the meantime, he had two personal reactions:

-- he had been "a little optimistic at the end of INFCE" regarding Japan not using plutonium for LWRs. As a result of the oil crisis, the need to accelerate breeder deployment was felt more deeply than 2-3 years ago. At the same time, the difficulty of commercialization of breeders was also felt. Thus, if we restrict plutonium use from now over the next 10, 12 or 15 years solely to breeders, the Japanese situation might be similar to that of the UK. Yatabe said he was saying this because the Japanese second reprocessing plant simply had to be pursued. Yatabe was not sure if Japan could provide the US with a plutonium supply/ demand balance which would satisfy US requirements on the reprocessing plant (namely justify the plant solely because of breeders and advanced reactor needs). However, he stressed that the needs and projections had to be closely looked at.

-- If some excess plutonium had to be stored for some period, Yatabe was not sure if IPS would be available on time for controlling the storage. The last meeting on IPS was not very encouraging; development of IPS might require some time. If so, Yatabe wondered if countries such as the US and Japan could develop release criteria and some of the other things similar to IPS for use on a bilateral basis pending establishment of an international regime.

5. Regarding Yatabe's first point, Smith said the US envisages a "rolling review" so that adjustments could be made. Van Doren added that the review would be to permit new programs, or adjust for scheduling changes, but not cut off programs agreed on. Smith said that if a program had to start in the next 10-15 years, we could consider it.

6. Regarding IPS, Van Doren said the direction in which the IAEA study had been going was now being challenged by the real partners in interest. The UK and France had real live customers they had to deal with. The French view was that the initial IPS should be modest. If it were, one would not have to burden the international

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system with determinations on specific uses. Yatabe said that when he talked to Pecquer in June, Pecquer had agreed there should be agreement on the rules among the US, France, UK, FRG and Japan. Van Doren said that this modest system would have to include all the customers of LaHague and Thorpe (including Switzerland, Sweden and Spain) and that it would have to provide a good precedent for the future. Van Doren noted that the tide had now turned towards a more modest IPS.

7. Yatabe then asked whether we could discuss these subjects more efficiently in Vienna on the basis of a paper. Smith said that we could try to put something down in writing on a very informal noncommittal basis. Van Doren suggested that it might be desirable at the next bilateral meeting in Vienna in September to consider projections of plutonium supply and demand for Japan in order to develop a common appreciation of real needs. Yatabe appeared affirmative.

8. Yatabe said the second Japanese reprocessing plant would be designed for a capacity of 1400 metric tons. This entire capacity could probably be justified in 2000, but perhaps not before. Van Doren asked whether the Japanese had figured in reprocessing of the breeder fuel.

9. Bengelsdorf asked whether Yatabe saw an acceleration of the Japanese level of effort on thermal recycle. He said such "acceleration" would represent a major point of divergence from current US attitudes. Yatabe said he did not know. Japanese utilities were not interested in plutonium as fuel, but the Government of Japan might adopt a different policy. Yatabe said that commercial breeder siting would be difficult in Japan due to public acceptance questions.

10. Hodsoll asked whether plutonium supply and demand for breeders and advanced reactors might not be in balance through 1990. He noted his understanding that the second Japanese reprocessing plant would not become operational until the mid 90s and that the demands of the Joyo and Monju breeder R&D programs and the Fugen program could account for plutonium generated to that point. Yatabe said that there would be a sizable demand for breeder and advanced reactor R&D over the next 10 years and that the second reprocessing plant would not be in operation before the 90s. He said the Japanese would have to look closely at the figures.

11. Smith then asked Yatabe the status of French cooperation regarding the second Japanese reprocessing plant. Yatabe responded that he did not know to what extent French technology would be used. He said the French seemed "eager," but that Japan has "not always been confident on French technology." Smith asked whether the French

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warranties on the Tokai plant had expired. Kurihara said that he understood the French warranties extended through the period for hot and cold tests. Yatabe thought these warranties had probably expired.

12. Yatabe said that Japan was prepared to cooperate on the development of advanced safeguards technology for reprocessing and enrichment plants. He noted the forthcoming meeting in Japan in October on enrichment safeguards.

13. Yatabe then asked what the latest French attitude was regarding FSS. Smith said the French were split (with Giscard and the Foreign Minister on one side, but with others opposing). Yatabe then asked about the FRG and Italy. Smith said that, if France adopted an FSS approach, he did not see how the Germans and Italians could afford to be isolated. Smith noted the Canadians had told us the French would be prepared to trade FSS for "predictability" on supply and consent arrangements.

14. Yatabe asked for our latest impressions on Australian enrichment. Bengelsdorf noted that the US and Australia were involved in a pre-feasibility study of this matter, that there had been US meetings with both the Australian government and the Australian industry group, and that the industry group would be coming to the US again in September. Yatabe asked whether we had concluded a confidentiality agreement. Bengelsdorf said he was not sure, but this was intrain and we did not plan to transfer classified or sensitive information in any event. (After the meeting, Schrage called Kurihara to confirm that the confidentiality agreement had been signed.)

Yatabe asked how serious the US was regarding enrichment in Australia. Bengelsdorf said it was very problematic whether there would be an economic need for new capacity any time soon given the slippages in nuclear power. The US wanted to keep its options open if Australia decided to move forward; we would not preclude US association with an Australian project. Yatabe asked whether an Australian enrichment plant would be consistent with US plans for Portsmouth. Bengelsdorf said the completion of Portsmouth was not on a more extended time scale, and acknowledged that there were a number of questions as to whether an Australian project would be viable. Van Doren noted that the Australian government did not plan to subsidize an Australian plant which would have to proceed, if at all, on its industrial/commercial merits.

Yatabe said Japan was about to conclude a confidentiality agreement with Australia regarding the second phase of its joint study regarding Australian enrichment. He stressed that the Japanese had their own enrichment program (which was due to provide

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by 1995 twenty percent of Japan's SWU needs); any Australian plant must be consistent with this, since the viability of an Australian enrichment plant would depend in large part on the Japanese market. Yatabe said the French were the most serious regarding Australian enrichment, and that they appeared to want to replace COREDIF by Australian enrichment. Yatabe thought URENCO's principal purpose was to stop the French.

Bengelsdorf noted the US had stressed to the Australians that US technology was highly competitive and that current US enrichment services were provided at significantly lower costs than those of URENCO or EURODIF.

15. Yatabe noted his understanding that the US had completed a new estimate of the time in which Pakistan could produce a nuclear explosive. Locke replied that additional information had led us to conclude that Pakistan could have a plutonium-fueled device sooner than had been earlier estimated. Yatabe said Japan was making inquiries to see if any Japanese firms were assisting in this effort and we would be informed of the results of the inquiries. Smith said there was continuing evidence of the Europeans not taking the Pakistani problem seriously. Smith added that we also had serious concerns regarding Iraq.

16. Yatabe asked where we stood on South Africa. Smith reported the French concern that their being paid upon completion of the Koeberg reactor project not be jeopardized by failure of the reactors to start up on time because of lack of fuel. The French are prepared to supply fuel on an interim basis in substitution for the US, and under the same conditions required by the US (NPT and safeguards). Smith was less optimistic than the French that South Africa would be willing to adhere to the NPT.

Yatabe said Japan was concerned about the possibility that the UN Security Council would adopt sanctions against imports of uranium from Namibia and South Africa. Japan would be adversely affected, since it buys such uranium on the London spot market. Smith noted that the UK and perhaps others would be similarly concerned at the prospect of losing access to uranium marketed by South Africa.

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