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MEMORANDUM

NATIONAL SECURITY COUNCIL

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May 29, 1980

MEMORANDUM FOR: S - LEON BILLINGS  
[S - BERL BERNHARD]

FROM: JERRY OPLINGER

SUBJECT: PRC Option's Paper re Non-Proliferation

This is a very rough draft thrown together under pressure of time; I'm sending it without trying to polish. There is much more that could be said; this is intended merely to give you a different perspective than you are likely to get in-house. I hope it's of some use.

I include a copy of PD-8, the President's original decision memo on non-proliferation, which people tend to forget and love to ignore. I'm also including a copy of the original Smith memo, which you needn't read -- a quick scan will give you an idea of where this all started.

I have not tried to deal with the other options in the paper (1 and 2(a)) on reprocessing. The essential fact is that we need not move from where we are now; nobody is hurting and the existing Presidential guidelines will provide plenty of plutonium for reasonable R&D programs. If we must move, 2(a) is a very generous concession and the outer limit of what we can do while retaining a meaningful policy.

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Review 5/29/86

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E.O. 13526, Sec. 3.3  
NW 34735  
By 2125, NARA, Date 3-9-16

Non-ProliferationPRC Options Paper

The inscrutability of the PRC Options Paper results from several things: obfuscation, poor drafting, the skewing of its analysis to support a set of policy pre-judgments, and the editing down of a series of previous papers to protect positions rather than clarify issues.

The paper is intended to deal with three distinct issues. They are the survivors of a bureaucratic negotiation, not a coherent selection of the most important non-proliferation issues before us; differences in their importance, immediacy, and potential consequence are very large:

- I. Whether the US should now broadly liberalize its policy on approving the reprocessing of US-supplied nuclear fuel, and the use of the extracted plutonium in foreign breeder programs;
- II. The position we should take with respect to a proposed International Plutonium Storage regime (IPS);
- III. A proposal to issue long-term fuel export licenses instead of single reactor reloads.

I. Reprocessing and Plutonium Use Policy

The heart of the Options Paper is the proposal (Option 2(b)) that we move now to a sweeping settlement of the continued differences between the U.S. and other advanced countries on the development of plutonium fuel cycles. We would do this by granting them blanket,

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advance approval to reprocess US-origin fuels and use the resulting plutonium in their programs. In short, we would end the fuel-cycle controversy by surrendering to their views. In doing so, we would step sharply away from the policies set forth in one of the President's earliest foreign policy decisions (PD-8 of April 1977, copy attached).

The paper, implicitly or explicitly, makes essentially three arguments for such a change:

1. The need to resolve the political tensions which continued disagreement on nuclear issues produces in our bilateral relationship with key allies. No assessment is provided of the relative importance of the nuclear issue within the broader relationships; there is little evidence that the governments concerned (as opposed to their nuclear bureaucracies) regard the nuclear issue as critically important or urgent. Moreover, despite accumulating evidence that the premises underlying the President's original policies are correct, and the fact that those policies are not seriously prejudicing foreign nuclear programs, the unspoken assumption is that the disagreement must be ended, ended now, and ended by US capitulation to allied preferences and choices.

2. That EURATOM and Japan are our allies; that they represent no proliferation threat; and that constraining their nuclear energy programs punishes our friends without affecting real proliferation problems. What Europe and Japan do does matter, not because they are a direct proliferation threat, but because what happens there will set an extremely influential example in the rest of the world. It will also create large economic pressures to export surplus materials, and to recoup large R&D investments by exporting breeder technology and hardware to the rest of the world.

3. That by resolving the fuel-cycle disagreement, we can achieve allied cooperation in building a better non-proliferation regime.

While the paper scrupulously avoids setting forth an explicit bargain, it clearly posits the advantage of accommodating Europe and Japan in order to achieve the objectives listed on pp. 5-6.

The ambiguity and fuzz surrounding these listed objectives has been sufficiently pointed out in the Bingham/Zablocki letter to Smith of May 8, 1980. The objectives are loosely described, and decisions as to which would be minimally acceptable as a trade-off for the specific and concrete US concessions are left for a later stage, after we may be locked into a negotiating process from which it may be almost impossible to withdraw.

Specifically, the paper calls for us to "seek:"

1. Deferral of commitments to commercial thermal recycle for a specified period. (Thermal recycle is the recycle of reprocessed plutonium in present-day reactors.)

The President is not told how long the deferral should be; only commercial recycle is banned (everything will then be called research); only commitments are prohibited (and mere experimenting on any scale may be allowed). More important, as discussed above, the stockpiling of plutonium during the deferral, if we permit unconstrained reprocessing of US fuel, will create enormous pressures to go ahead <sup>with thermal recycle</sup> as soon as the deferral is over.

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2. Avoidance of excess national stockpiles of plutonium.  
But the relaxation will create incentives <sup>to produce</sup> just such stockpiles.
3. Obtaining from EURATOM controls over spent fuel.  
But we would define them so as to render them ineffective, as the price of getting them.
4. Continued restraint in the export of sensitive nuclear technology.  
We already have a commitment; this would simply confirm it.
5. Strengthen supplier state cooperation in dealing with problem countries.  
No specifics are provided. This is recognized as a "hope," not a concrete objective.
6. A miscellany of vague "motherhood" items.

The paper does not attempt to assess the additional proliferation risks which relaxation of US policy would create, and whether, even if all of the objectives listed were obtained, they would adequately contain those additional risks. An understanding of this question requires a quick look at European and Japanese plans.

Because we lack control over the disposition of materials supplied to EURATOM, there is little we can do to affect their breeder programs short of an embargo on further fuel supply. Nobody contemplates such an embargo, which is why our diminishing share of the European fuel market is not very relevant to the choices before us.

But the Europeans also plan activities which have large proliferation implications and which involve the reprocessing of spent fuel we do control. France and the UK each plan to build very large reprocessing plants in the next several years which are not needed

to produce plutonium for their breeder R&D programs, and whose primary purpose is to reprocess spent fuel as a commercial service to other countries, <sup>whose spent fuel is under our control.</sup> Japan is their biggest customer, and is putting up the front-end money to build these plants as well as providing a large share of their future business. Moreover, Japan itself plans to build an additional large reprocessing plant of its own.

Any one of these three projected plants would more than swamp the projected plutonium needs of all the breeder R&D programs in the world. Three of them will produce a vast surplus of pure, weapons-grade plutonium amounting to several hundred tons by the year 2000. Not only would that stockpile of separated plutonium constitute a danger in itself, it would <sup>eventually</sup> drive these nations, and those watching their example, into the recycle of plutonium in today's generation of reactors for economic reasons. Thus the use of plutonium as a fuel may occur whether or not breeders catch on, simply because too much reprocessing and plutonium production takes place in the near future as a means of waste "disposal." The attached graph shows the maximum projected needs for R&D purposes in Europe and Japan until 2000, and the maximum amount of plutonium presently projected to be reprocessed during the same period.

The amount of potential US leverage on this problem is not overwhelming, but it could be extremely important. More than half of the spent fuel which could be reprocessed in the new French and British plants, and virtually all of the fuel for the Japanese plant, is under US control. A rigorous application of our consent rights would deny most of this business, make the completion of these plants a much more dubious commercial venture, and sharply reduce incentives to complete them.

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The stakes in a decision on liberalizing our control rights are thus very large.

## II. Fuel Licensing (pp. 18-19)

Conventional, current practice is to issue fuel export licenses for one reactor reload at a time. We have told a selected group of countries that we will issue up to five reloads at a time.

The proposal here is to license for the fuel needs of the entire lifetime of the reactor -- up to 40 years. That is an extreme position; it gives up the subtle and effective non-proliferation leverage in fuel supply for a period far in excess of our ability to predict the likely future behavior of virtually any country.

The paper should include a more limited option -- perhaps a 10-year license, and only for countries who have renegotiated their agreement with us to the non-proliferation standards set forth in the NNPA.

## III. International Plutonium Storage (IPS)

The basic notion here is to set up a decentralized storage regime for separated plutonium under some kind of international control. Plutonium would be released for any "peaceful" purpose. The hope is that international involvement would increase the political barriers to misuse. But an IPS is also an international distribution regime for plutonium, which implies that it is now safe, and gives international sanction to its release for national purposes so long as they are declared peaceful. The risk is that this would catalyze widespread reprocessing and use of plutonium in any participating country.

The President, in PD-8, directed that IPS should be discouraged. There should be an option sticking with that position.

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Evolution of the Paper

It should be understood that the positions put forth in the paper represent a considerable degree of compromise. Some of the rationale and intention behind it can be judged from the February 16 memorandum attached, which represents the strategy Ambassador Smith originally recommended. It went much further than the current paper. It would have, for example, made no pretext of attempting to limit reprocessing in Europe and Japan, and would have accepted explicitly the proposed 1500-ton reprocessing plant in Japan as well as the two big plants in France and the UK.

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THE WHITE HOUSE  
WASHINGTON

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March 24, 1977

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Presidential Directive/NSC-8

TO: The Vice President  
The Secretary of State  
The Secretary of Defense  
The Director, Arms Control and  
Disarmament Agency  
The Administrator, Energy Research  
and Development Administration

ALSO: The Director of Central Intelligence  
The Chairman, Nuclear Regulatory Commission  
The Assistant to the President for  
Energy Policy

SUBJECT: Nuclear Non-Proliferation Policy

It shall be a principal U.S. security objective to prevent the spread of nuclear explosive -- or near explosive -- capabilities to countries which do not now possess them. To this end U.S. non-proliferation policy shall be directed at preventing the development and use of sensitive nuclear power technologies which involve direct access to plutonium, highly enriched uranium, or other weapons useable material in non-nuclear weapons states, and at minimizing the global accumulation of these materials.

1. Specifically, the U.S. will seek a pause among all nations in sensitive nuclear developments in order to initiate and actively participate in, an intensive international nuclear fuel cycle re-evaluation program (IFCEP) whose technical aspects shall concern the development and promotion of alternative, non-sensitive, nuclear fuel cycles. This program will include both nuclear supplier and recipient nations.
2. For its part the United States Government will:
  - Indefinitely defer the commercial reprocessing and recycle of plutonium in the U.S.

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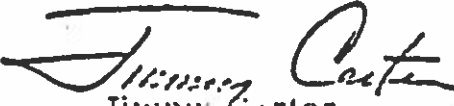
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By JDS, NARA, Date 3-9-76

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Copy for Dr. Jessica Tuchman

- Restructure the U. S. breeder reactor program so as to emphasize alternative designs to the plutonium breeder, and to meet a later date for possible commercialization. As a first step the need for the current prototype reactor, the Clinch River project, will be reassessed.
  - Redirect the funding of U. S. nuclear research and development programs so as to concentrate on the development of alternative nuclear fuel cycles which do not involve access to weapons useable materials.
  - Provide incentives, in the area of nuclear fuel assurances and spent fuel storage, to encourage the participation of other nations in the International Fuel Cycle Evaluation Program. Detailed studies of these programs shall be carried out by the NSC Ad Hoc Group established herein, and submitted to me as directed in the accompanying memorandum.
  - Initiate a program of assistance to other nations in the development of non-nuclear means of meeting energy needs.
  - Increase production capacity for nuclear fuels.
3. It shall also be U. S. policy to strengthen the existing non-proliferation regime: by encouraging the widest possible adherence to the Non-Proliferation Treaty, and to comprehensive international safeguards; by strengthening and improving the IAEA; and by providing stronger sanctions against the violation of nuclear agreements. Therefore the U. S. will announce its intention to terminate nuclear cooperation with any non-nuclear weapons state that hereafter
- detonates or demonstrably acquires a nuclear explosive device; or
  - terminates or materially violates international safeguards or any guarantees it has given to the United States.
4. In order to implement these policies to perform the necessary studies, and to coordinate departmental activities in the non-proliferation field, I hereby establish an NSC Ad Hoc Group, to be chaired by the Department of State, and to include the Presidential Assistant for Energy. This group shall establish task forces, chaired by the appropriate agencies, to perform, among others, the tasks detailed in the accompanying memorandum.

  
Jimmy Carter

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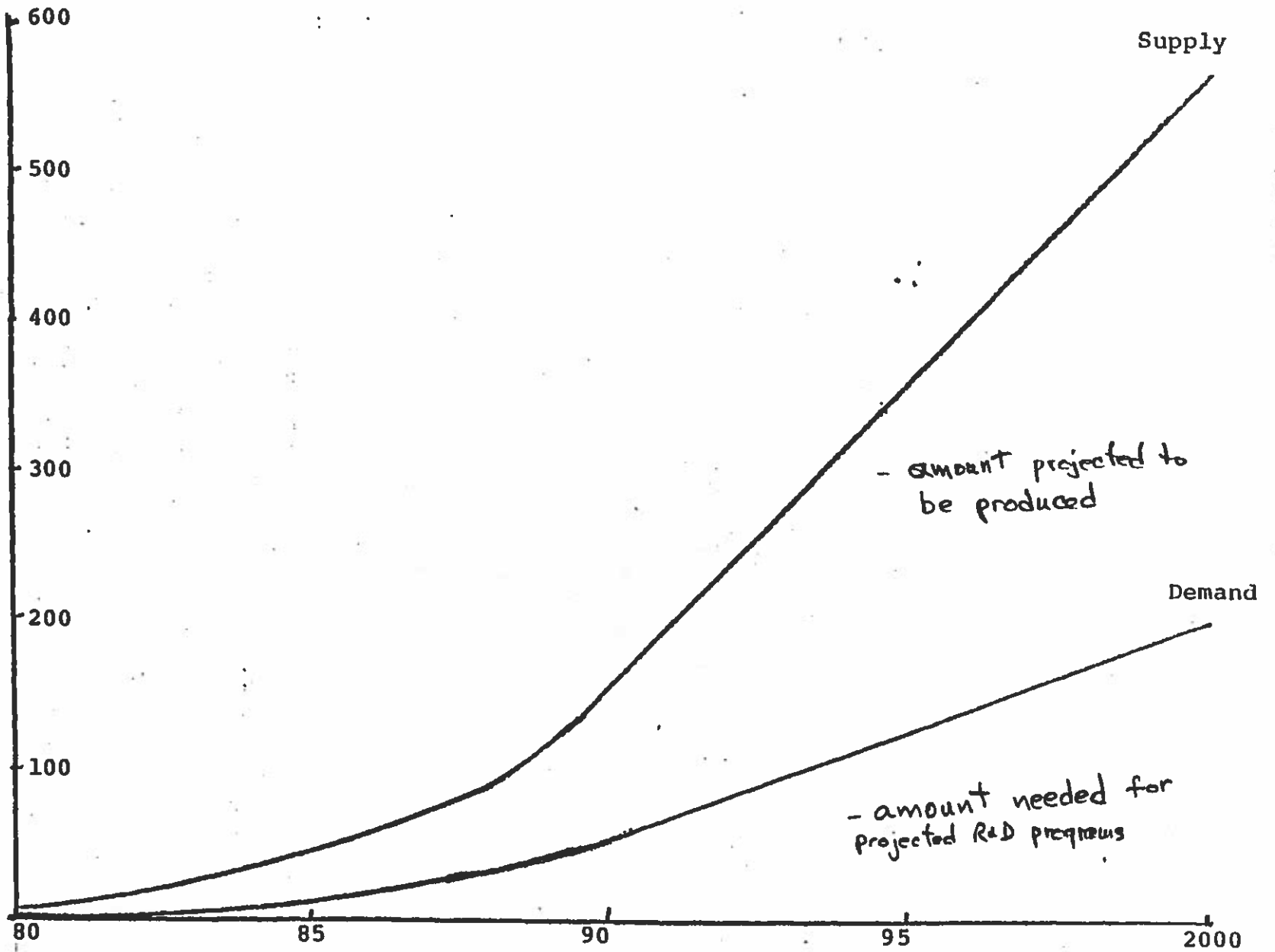
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The NSC Ad Hoc Group, established in PD- , is directed to:

- prepare and submit by March 31 a comprehensive list of all activities, facilities and technologies related to nuclear power, which involve direct access to weapons useable materials;
- prepare and submit by April 1, a review of the Fiscal 1978 budget with appropriate recommendations to implement the policies set forth in the accompanying Presidential Directive;
- prepare and submit by April 5, proposed nuclear export policies, including: a summary of current applications for export of Highly Enriched Uranium and plutonium; criteria which should be applied to nuclear exports at the licensing stage; a list of criteria and conditions which should be required for new and amended agreements for cooperation, and necessary revisions in existing agreements; explicit options covering U. S. policies on consent to retransfer, reprocess, reexport and reuse U. S. -supplied fuels, Highly Enriched Uranium, plutonium, and materials irradiated in U. S. -supplied facilities; and legislative proposals to implement these recommendations;
- prepare and submit by May 1, a detailed study of measures the U. S. might take so as to be able to offer nuclear fuel assurances to nations participating in the International Fuel Cycle Evaluation Program, including: rigorous revised estimates of future nuclear energy demand; measures to expand U. S. enrichment capacity; analysis and justification of U. S. stockpile programs; recommendations for appropriate terms and conditions for future toll enrichment contracts; assessments of the benefits of declaring an open season on enrichment contracts; exploration of international undertakings and agreements; and other short and long-term options for providing nuclear fuel assurances and collaborating with other suppliers;
- prepare and submit by May 1; a thorough study of measures the U. S. might take concerning nuclear fuel storage including: measures to expand U. S. spent fuel storage and transportation capacity; proposals for meeting the storage needs of those participating in the International Fuel Cycle Evaluation Program; analysis of the advantages and disadvantages of international spent fuel storage (~~but not plutonium storage which the U. S. shall discourage~~) and measures to accelerate the development, demonstration and licensing of long-term spent fuel storage, both retrievable and termin...

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Metric Tons Plutonium



Projected Cumulative Plutonium Supply and Demand Situation  
For Western Europe and Japan - Base Case

Figure III-1

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