July 26, 1973
Sonnenfeldt to Kissinger, 'Supplementary Checklist for Meeting with French Defense Minister'

Citation:

Summary:
When meeting with the French Defense Minister Kissinger is to stress how much the U.S. has supported France despite negative views on such assistance by European countries and by Congress, and that this president could not be more sympathetic to French needs. The NSSM 175 review of the policy towards France is attached, and it reviews previous aid given to France, complications that arise due to restrictions on such aid, and what the French are now requesting. It extensively reviews missile assistance, nuclear safety exchanges, and other French aid issues. The second part addresses the issue in light of U.S.-European political relations, and the effect any such aid might have on such relations. It notes that future French aid might be given to hardening technologies, and to aiding in Poseidon information, and to underground nuclear testing, and it weighs the pros and cons in the eyes of the British. It concludes with an overview of how such aid could be in the interest (or not) ...

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Contents:
- Scan of Original Document
MEMORANDUM FOR MR. KISSINGER

FROM: Helmut Sonnenfeldt

SUBJECT: Supplementary Checklist for Meeting with French Defense Minister

1. French conduct on Year of Europe.
   -- Jobert's inflammatory comments in Copenhagen;
   -- French failure to live up to commitment to help drafting texts.

2. Flora Lewis article concerning nuclear war agreement.

   -- Note French efforts to stir up adverse European reactions -- can only hurt European interests since French interpretations favor Soviets.

4. French nuclear tests.
   -- Stress our helpful posture.

5. Congressional debate on US troops abroad.
   -- Point out how much better we would have been off in the debate if we could show movement on Atlantic relations.

6. Relationship between Bilateral Military Cooperation and Atlantic Relations.

[See next page]
a. You should point out that when we turned around US policy toward France in 1969 we explicitly rejected the position of our bureaucracy to make improvement of bilateral relations, especially military, conditional on a more cooperative French attitude in NATO. We rejected theological debates about bilateralism vs. multilateralism. We took the view that close bilateral relations with France were one of the pillars of our European policy on their own merit. We dropped all efforts to tell the Europeans how to organize themselves. We reversed previous policy opposing the French nuclear deterrent. In Iceland, the President made a perhaps uniquely self-critical statement about our past policies toward France.

b. Our French policy was repeatedly criticized by Allies who felt we were making bilateral concessions to France at the expense of the Alliance and perhaps even of the unification of Europe.

c. There will never be a President more sympathetic to French views and aspirations than the present one.

d. But we cannot conduct policy in a vacuum, or, even worse, in an environment that becomes increasingly uncongenial to that policy. The issue of bilateral military cooperation with France in sensitive areas is potentially highly controversial and ultimately requires Congressional endorsement, no matter how sympathetic the Administration may be to it.

e. There should be no illusion that Congress succeeds in diluting or undermining the US military commitment to Europe as a whole (because the Europeans have pulled the rug out from under the Administration's efforts to stop the Congress), it will then turn around and support seriatim US commitments to individual European countries. This is especially true in the area of nuclear and strategic weaponry, where we are already having serious trouble with our own programs in the Congress. Moreover, since Congressional action on the military front will also contribute to worsening economic relations with Europe -- we will have lost the political base for restraining economic interest groups -- the climate will be even more inhospitable to sensitive bilateral military cooperation.

f. So our Year of Europe initiative, already widely and wildly misinterpreted in Europe as blackmail, hegemonism and an effort to force Europe into a regional role, was in fact designed not only to achieve a new overall Atlantic spirit but to give us a solid base from which to conduct bilateral relations, especially with France and very much on terms the French want. No other Administration would or could attempt to do this.

g. This is what makes French behavior so incomprehensible.
EXEMPT

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EXEMPT

MR NLN 00-10 / 8  pp. 23-29 of 62  pages
MEMORANDUM FOR THE ASSISTANT TO THE PRESIDENT FOR NATIONAL SECURITY AFFAIRS

SUBJECT: Response to NSSM 175 (U)

(C) Attached is the DOD response to Part I of NSSM 175, U.S. Nuclear Defense Policy Toward France. The Department of State will be forwarding to you under separate cover the response to Part II. Both Departments have collaborated on the preparation of the two sections of the NSSM and are now jointly preparing a short executive summary which integrates the political and military considerations in this review of our nuclear policy toward France. This summary will be forwarded to you shortly.

cc: The Secretary of State

Enclosure

a/s

11 MAY 1973

[Signature]

5/11/73

Upon removal of attachments this document contains

Sec Def 2023

Sec Def Cont Nr. X-- 2023
NSSM 175 - U.S. NUCLEAR DEFENSE POLICY TOWARD FRANCE

Part 1

In the fall of 1969, French defense officials carefully put out feelers to their American counterparts about the feasibility of limited U.S. assistance to their strategic missile program to help them save time and money in improving the reliability and operability of their current systems. At the same time, the State Department was under French pressure to liberalize the restrictions on export of advanced computers which the French Government felt it needed for its nuclear weapons research. President Pompidou repeated the request for missile assistance to President Nixon when he visited Washington in February 1970. The U.S. Government deliberated over these requests for several months, ultimately reviewing the whole issue in the NSSM 100 study. Also included in that review, along with consideration of other possible areas of cooperation, was the question of whether we should take the initiative with France in seeking a series of exchanges on our respective nuclear safety practices.

The purpose of Part I of the NSSM 175 study is:

- to review what has been achieved under those two NSDMs and evaluate its importance to France;
- to review what other U.S.-French defense cooperation has gone forward during this period;
- to identify the problems and difficulties encountered because of the constraints on our assistance;
- to identify what additional assistance the French now desire that is restricted by current guidance and what other areas might interest them in the future, and to assess the implications for the U.S.;
- to consider other initiatives in this general field which might be in the U.S. interest; and
- to assess the military advantages and disadvantages of adopting a policy which would further the development of a viable, independent French strategic capability.

Part II of the study will examine the last question from the political point of view. It will also outline alternative forms the U.S.-European nuclear relationship might take over the longer term and how our current assistance to France might fit into them, and assess allied and adversary reactions to various kinds of assistance and patterns of U.S.-European nuclear relationship.

A. Missile Assistance.

Both land-based and sea-based missile systems are included in the assistance. Formal agreements between the two Governments for this program were executed in October 1971 by Dr. John S. Foster, Jr. for the U.S. and M. Jean Blancard, Ministerial Delegate for Armaments, for France.

The agreement provides that assistance will be channeled through a single-point-of-contact for each country. The U.S. effort is headed by Mr. G. R. Barse of Dr. Foster's staff, and the French single-point-of-contact is Ingenieur-General M. Brunet, head of missile development and procurement in the French Armaments' Ministry. The procedure followed in this cooperation is for the French to formulate specific questions pertaining to problems they are experiencing in the design, production or operation of their current systems. These questions, and backup technical data are first presented orally to a U.S. team and are then formally forwarded in writing. U.S. responses are provided initially in writing and supplemented as necessary by discussions between appropriate U.S. and French Government experts. No non-government contractor personnel have participated directly or indirectly in these exchanges. Certain technical questions, however, have been taken out of their French context and put to contractors in cases where they were the only people who possessed the relevant expertise. Numerous meetings have been held between U.S. and French officials in both Paris and Washington, and the French have been very forthcoming in providing information about and access to their systems. U.S. officials have visited both French laboratories and test sites. Relations between the two defense establishments have been extremely cordial at both the senior and the working level.

To date, our exchanges have been largely in the area of conventional missile engineering -- pertaining to specific problems in areas such as propulsion, electrical systems, gyros, hydraulics, materials, safety, maintenance, etc. Areas in which we have assisted include:

- Propulsion

Extensive and continuing assistance on detection, assessment, repair and avoidance of propellant separation. This apparently has been a significant problem to the French, and continues to be a major concern.
- Gas bearing gyros for submarine navigation equipment
  Provided information to improve reliability and extend life, probably solving existing failure problems.

- High pressure nitrogen tanks
  Provided information and consultants (U.S. government employees) to solve serious and potentially dangerous corrosion problems in missile control system. Tanks redesigned in accordance with U.S. recommendations.

- Missile ignition safety in submarines
  Provided information on methods to insure against inadvertent ignition in submarine tube.

- Electrical connectors
  Provided information on U.S. approach to connectors. French had several flight failures due to faulty connector design and test.

- Hydraulic systems
  Provided information on materials and methods to avoid leakage in long-term storage.

- Nuclear hardening test methods
  Provided information on several widely applicable methods for laboratory simulation of shock resulting from nuclear exposure.

- Nuclear hardening techniques
  Provided general information in response to specific questions related to hardening techniques, enough information for them to realize we have considerable expertise in this field, which could be very valuable to them.

- Missile maintenance and reliability
  Provided Information on U.S. methods for guidance and missile maintenance and service-life evaluation.

We believe, and the French have confirmed, that our assistance has been of significant value, saving them both the time and money required to solve these problems alone. An estimate of the savings to them is impossible to make, but informal comments have suggested that in certain areas they regard it as on the order of several years at least, and possibly millions of dollars. It should be recognized, however, that there is little doubt but that they could and would have solved these problems on their own if our assistance had been unavailable. It has been the unanimous opinion of those U.S. experts who have been involved that the French engineers and designers are extremely sophisticated and capable.
In entering into this missile cooperation with France, the U.S. was under no illusion that we would gain substantial technical benefits from our exposure to French missile development. The considerable U.S. technological lead in the missile field made that extremely unlikely, and our experience with the program to date has confirmed our expectations. The French, however, repeatedly have told their American counterparts that if any aspect of French technology was particularly interesting to the U.S. or of potential utility to us, they would be very happy to furnish us as much information as possible.

Defense Minister Debre raised some of these questions in a general way in his meeting with Secretary Laird.

It should be noted that some -- in fact, most -- of the new questions we have been asked are different in nature from the initial ones in two ways: (a) they are applicable primarily to potential next generation systems, and (b) they cannot be answered so readily by conventional engineering. The French have indicated that these questions enjoy a high priority in their own thinking and they would like very much to proceed with appropriate exchanges.

A valid case probably could be made that we are just now reaching the point where the French are starting to ask their most important questions. The exchanges to date, while their value should not be minimized, could very well have been a lead-in, to test our sincerity, break the ice gradually, and not pose any real strain on us in reply. This is not to say in any way that they were not valid and compelling questions and problems, but rather that the ones now and in the future are probably regarded by them as intrinsically more important, and a more stringent test of what sort of relationship the U.S. is willing to establish with French strategic programs. Discussions with French officials have revealed that they believed from the outset that the cooperation would lead eventually to U.S. assistance with next generation systems.

In reporting these new requests to the President, the Secretary of Defense recommended that we take a limited step forward in certain areas while we examined the broader questions and implications raised by a substantial expansion of U.S.-French nuclear cooperation. In response to this recommendation, the President authorized the following additional assistance on March 9, 1973:
On April 16, Secretary Richardson wrote the new French Defense Minister, M. Galley, to congratulate him on his appointment and to inform him that we were prepared to move ahead in these additional areas.

The initial information the U.S. is providing in these new subject areas undoubtedly will give rise to further questions and requests which DOD will respond to in keeping with the President's March 5 guidance.

It should be noted that this guidance provides adequate flexibility for DOD to be able to continue the missile assistance program in a constructive and substantive manner for a considerable period of time -- at least a number of months, and possibly as long as a year -- depending on how far the French wish to pursue these matters. Later on in this paper we will discuss one of the constraints -- the prohibition on use of U.S. contractors -- that has hampered the effectiveness of our overall efforts in this missile assistance. In connection with these new areas of assistance, it definitely would improve the quality and responsiveness of the U.S. assistance if DOD at an early date were able to bring in a limited number of defense contractors with special expertise on these problems.

B. Nuclear Safety Exchanges.

They accepted this invitation in February 1972 and an initial discussion on the scope of the talks and procedural matters was held in May 1972. This has been followed by three full-scale technical meetings in June and October of 1972 and April 1973. The scope of the talks has centered on operational nuclear safety procedures for use in the field of strategic land and sea-based missile systems, strategic bombers, and tactical missiles and aircraft. General principles of nuclear safety, safety procedures, and technical aspects of nuclear warhead safety have also been discussed.
At the first technical meeting the French nuclear safety program was reviewed and found to be well thought through and conservative. Practices were generally similar to those used by the U.S. At the second technical meeting, U.S. presentations were mainly in the area of design principles and techniques for insuring nuclear safety, including arming and fuzing components. Also covered were U.S. data on accident-related environmental extremes to which nuclear weapons might be exposed and associated testing procedures.

The third technical meeting in April 1973, included unclassified discussions on one-point safety of nuclear weapons and plutonium scattering as a result of a nuclear accident. Topics from earlier meetings were also discussed further. In addition, a visit was made by three members of the U.S. group to the land-based strategic missile installation on the Albion Plateau. This visit will be followed by other mutual exchange visits to the operational nuclear bases of each nation.

The talks have been productive and mutually rewarding on the whole. As with the missile assistance, there have been no major technological benefits to the U.S. from these exchanges, but the U.S. representatives consider the French to have been candid and relatively open in describing their safety systems. Short of initiating a program of detailed U.S. assistance to French nuclear safety design, there is probably a limit to the number of useful exchanges that can ultimately be held on this subject. For the present, however, there is still sufficient relevant information for exchange to make additional meetings worthwhile.

C. Relaxation of Advanced Computer Export Restrictions. In response to the French request that the U.S. relax its restrictions on the export of advanced computers so that they could purchase certain models for use in their nuclear weapons laboratories, this decision was transmitted to the agencies by memorandum of October 13, 1971. The French were informed of this decision on October 18, 1971.

In July 1972, the French Defense Minister informed Secretary Laird that France was interested in obtaining a computer still classified as advanced, the CDC 7600 (2180 million bits per second CPU bus rate and 328 million bits per second processing data rate), for use in a nuclear weapons laboratory. No response has been given to this French inquiry.

D. Status of Other U.S.-French Defense Cooperation. Since the initiation of the major U.S. strategic assistance and exchange programs discussed above, we have been watching other areas of U.S.-French defense
interaction closely for evidence of new, more cooperative attitudes on the part of France. While the evidence of new French cooperation and assistance to the U.S. in the defense area is hardly overwhelming, there are some signs that France may now be prepared to begin moving away from some of the doctrinaire restrictions of the past. Among the indications that point in that direction are French attitudes on:

- **U.S. Relocation Claim Against France (FRELOC)**. The U.S. claim of $378 million for the costs of moving out of France in 1966 had lain dormant in the French Foreign Ministry ever since it was presented in 1968. Last summer, Secretary Laird raised the matter with Defense Minister Debre, pointing out the strong Congressional interest in French action on the claim. Shortly thereafter, the French Foreign Ministry proposed a lump-sum political settlement and high-level negotiations on an acceptable figure are now underway, although they are proceeding slowly.

- **Wartime Line of Communication Across France**. This question was also raised by Secretary Laird with Debre last summer. Laird stressed the importance this kind of French cooperation might have in helping to combat Congressional pressures for reductions of U.S. forces in Germany. Without formally committing themselves, the French have been willing to consider a U.S. presentation of alternatives on this subject. General Maurin came to Washington as the guest of Admiral Moorer in late April. While expressing continuing strong reservations on this subject, he did agree that a small delegation of U.S. military experts could come to Paris for technical discussions on the LOC question, provided there was no publicity about the visit.

- **Nuclear Coordination**. Secretary Laird discussed this subject with Debre as well, but, given his well-known Gaullist views, Debre did not pursue the matter. French military officials have indicated concern about the practical nuclear coordination problems they might have to face in a crisis, and the advent of French tactical nuclear weapons has apparently increased this anxiety. There have been recent indications the French are willing to extend the Lemnitzer-Ailleret agreement on coordination of French and NATO forces in Germany to include French First Army forces in France. General Maurin has indicated to General Goodpaster that if this step is successful, the French would then consider the problem of tactical nuclear coordination with SHAPE. The new French Defense Minister, M. Galley, is a good Gaullist, but he may be more flexible than the doctrinaire M. Debre on the desirability of U.S.-French discussions on practical nuclear coordination problems, both tactical and strategic.
Aside from these issues, the French at their own initiative have sought an exchange of views with U.S. defense officials about problems of bilateral coordination in COCOM and reducing U.S.-French competition in international arms sales. Neither subject has produced significant proposals, but the freedom to approach the U.S. bilaterally through defense channels on subjects such as this is something new in France. The French have also continued, and in some cases expanded, their cooperation with the U.S. in other defense areas:

- **Overflight Rights.** France continues to authorize peacetime military overflights of its territory for the U.S. and other NATO Allies. These rights have been renewed annually since 1966. Availability in wartime would depend on French decisions at that time.

- **Pipelines.** Under a 1967 agreement, a French company operates the POL pipeline for the supply of U.S. forces in Germany. Since 1971, the U.S. is also storing POL in France as part of its war reserve. France also permits peacetime operation of the NATO infrastructure pipeline. The availability of the system in wartime is not specified in the agreement.

- **NADGE (NATO Air Defense Ground Environment).** The French participate in NADGE but control their own ground stations.

- **Use of Bombing Ranges.** France permits U.S. use of a bombing range at Sulipes in northeast France which enables U.S. pilots stationed in Germany to maintain combat efficiency.

- **U.S./French Exercises.** The French continue to participate in exercises with us and have also taken part in some U.S./FRG exercises. For the first time since 1966, France also participated in a major NATO exercise earlier this year.
II. Problems in Current Cooperation and Direction of Future French Interest

A. Problems Arising from Legal and NSDM Constraints.

1. Nature of the Constraints.
The prohibition in the Atomic Energy Act against the transfer of Restricted Data (RD) and Formerly Restricted Data (FRD) to foreign nations, of course, places a constraint on the kinds of information on warheads and re-entry vehicles we can provide the French (the possibility of negotiating a formal agreement for the exchange of such nuclear information is discussed later in this paper). As the determination of what is and what is not RD is a judgment problem involving both the Department of Defense and the AEC, the two agencies have worked out an agreed set of ground rules for making those determinations and ensuring that we remain within the confines of the law.

2. Nuclear Safety Exchanges. The nuclear safety talks, as currently envisioned, are relatively unconstrained by the limits of classification. Roughly 90 percent of all useful information that is desirable for transmission to the French can be released under the present ground rules. Much of that information is unclassified: for example, all the DOD directives on the subject are unclassified. The current trend of the talks is in the direction of safety constraints on operating forces and this can continue for some time without requiring disclosure of Restricted Data or Formerly Restricted Data.

While most information can be provided the French, there remain several areas that are constrained from being subjects for discussion. Specifically, the following items cannot now be revealed in the talks:

- The majority of U.S. nuclear weapon designs are "one point safe." That is, initiation of an asymmetrical high explosive implosion wave, as a result of an impact, fire, or intentional act of destruction, will not result in a nuclear yield. How this design goal is achieved cannot be discussed in detail without revealing Restricted Data. However, the general principles are being discussed.

- Detailed discussion of plutonium scattering during U.S. nuclear weapon tests and accidents could provide the French with the amounts of plutonium and high explosive used in U.S. weapon designs. Such information is Restricted Data. However, most useful information on plutonium scattering currently can be transmitted.

Finally, while we have been able to furnish and demonstrate to the French certain safety components, at some point in the future direct interaction between U.S. and French scientists in a laboratory environment might be desirable.

3. Missile Assistance. There are several types or sources of constraint which have had or will have an impact on our ability to furnish missile information. Chief among these constraints are the following:
That our assistance not jeopardize the security of U.S. weapons systems. The French recognize this as a natural constraint, and have made clear that none of their questions are intended to challenge this principle. To date, we have provided substantive and responsive information without breaching the security of U.S. systems, and we believe we can continue to do so.

Outstanding French queries in this area, it is reasonable to expect that we may receive questions on guidance and accuracy if we removed other barriers to discussion of next-generation technology. The feasibility of U.S. responses might well turn on the degree of accuracy the French are pursuing. If, as we believe, the French do not design for a hard target capability, but for an urban/industrial target system, they should not require significant improvements in accuracy. If this is so and their questions really aim primarily at improving the effectiveness, lifespan and reliability of their guidance systems,
That U.S. assistance be confined to improving the operability and reliability of current generation systems. This restriction is not part of the NSDM per se, but was understood to be an underlying concern. Accordingly, language to this effect was incorporated in the formal bilateral agreement signed by both countries to govern the assistance. This agreement was approved by the Assistant to the President for NSC Affairs before the U.S. signed. French strategic programs are now in the stage of perfecting and producing current systems and beginning to lay out concepts and proposals for next generation systems. Increasingly their interests will turn to major system improvements that can be incorporated in the design of that next generation. We have already seen evidence of this in questions to date. Without relaxation of this restriction, such as that in the President's March 9 authorization, U.S. assistance would become of declining utility to the French.

Since detailed knowledge and data pertinent to reply to many of the French questions is available only within the industrial community; this has created definite problems. We have worked around it to date by taking selected questions out of context before asking contractors to develop answers. With the expanding nature of the program, and the type of questions involved, this already unsatisfactory procedure will become even more so. Moreover, the French have expressed a desire to visit U.S. industrial facilities to see the technical experts. However, a public relations scenario should be developed to deal with the increased risk of public disclosure of the assistance.
B. Present and Likely Future French Strategic Assistance Interests

1. Hardening Technology. The French have raised a long list of questions in this area, but they can be grouped into the following more general problem areas:

- What are the characteristics of the nuclear environment which French missiles, RVs and silos might have to face?

- What effects do various nuclear environments, such as X-rays, gamma rays, neutrons, EMP have on materials and components?

- What test techniques are appropriate to assist in the design and evaluation process?

- What would the U.S. consider to be reasonable hardening design goals?

We have not, as yet, been asked for any specific 'how to' design information, to assist in any design process or to critique any designs or redesigns, although it is reasonable to expect such requests if the barriers in this area were lowered.

The kinds of questions they have raised with us in this area, and the relatively small amount of information we have given them in reply, clearly indicate:

- that they have a great deal to learn;

- that they recognize the importance and urgency of making progress in this area; and

- that they know how much they potentially could learn from us and how to make maximum use of it.
Assistance in this field is probably the single most important contribution the U.S. could make to the viability of the French strategic program. It could save France several years or more of development and hundreds of millions of dollars.

In terms of security risks to U.S. strategic systems, so long as care is taken not to transfer information from which the vulnerabilities of U.S. weapons could be derived, a great deal of invaluable knowledge on hardening principles, design concepts, fabrication techniques, materiel effectiveness and test methods could be furnished. The USSR might find this information useful as a check on some of its own weapons engineering, but we believe that Soviet hardening technology is already well developed.

Although the new March 9 guidance authorizes general assistance in this area,
something a country with a smaller overall force cannot afford to do.

If credible decoys and other exo-atmospheric penahds can be developed, they could very usefully increase the exchange ratio which would be of considerable value to France in overcoming Soviet defenses. This, of course, assumes that the

In any case, the U.S. has substantial knowledge to offer France on RVs, chaff and decoys. The French might also benefit in their next generation designs from access to the UK decoy technology already alluded to.

The U.S. appears to enjoy a considerable lead over the Soviets in this field so some sensitivity on our part is in order on the transfer of this technology. As with hardening, exact information about the capabilities of U.S. systems must be protected, but this should be possible without great difficulty and without imposing excessive constraints on the quantity or quality of useful information we can provide France. The most sensitive area for us vis-a-vis the Soviets is the multiple RV technology.

Provision of penetration aid technology to France is not viewed as a major issue from a U.S. security standpoint, and the possibility of some leakage to the Soviets is not of over-riding concern. There is nothing in the NSDM itself that would require revision to permit U.S. assistance on penetration technology; however, we should recognize that this assistance will be almost exclusively applicable to next generation French missile systems. As with hardening, some of the best expertise in the penetration field is with U.S. defense contractors and a relaxation of the security restrictions against their selective involvement would greatly facilitate furnishing the best and most relevant information.

3. POSEIDON Information. The French have made a very low key approach to us regarding POSEIDON that leaves their purpose and motivation obscure. In the context of a discussion on a second generation modification to their missile submarines, they indicated they were interested
in designing those modifications so as to make their launch tubes compatible with the POSEIDON missile such that, "in an emergency we could launch POSEIDON missiles from our submarines." What they specifically requested was that we examine a cross section view of their submarine and launch tubes to determine whether there are any basic incompatibilities with POSEIDON. We have made no response of any kind to this question.

It is very difficult to assess at what level this initiative may have originated and exactly what lies behind it. Perhaps French engineers, with some intermediate level management endorsement, are simply taking into account all possibilities where future French policy is concerned at a stage when their design ideas for next generation systems are still very flexible. If it can be done without major perturbation to other elements in the system, why not design for compatibility with POSEIDON as a hedge against the future? They may indeed believe that our two Governments may reach some agreement on cooperation in an emergency even though that has been anathema to Gaullist policy heretofore. It may be possible that this query signals a new French willingness to consider some types of operational strategic coordination with the U.S.

The question of whether it would be in our interest (or in France's strategic interest) for them to obtain POSEIDON is a complicated technical and political issue that appears to go beyond the scope of their present interest and beyond the framework of this analysis, so we will not try to deal with it. The U.S. can respond to the immediate French question without disclosing precise data about POSEIDON characteristics and without going beyond information we have furnished the UK, making clear at the technical level that the fact of our willingness to respond to their question in no way embodies a commitment where POSEIDON is concerned. Further technical questions about POSEIDON should be discouraged at the present time, particularly in view of the impending UK decision on next generation submarine systems. In view of some of the potential political implications of this request, however, we may wish to pursue the matter in a low key fashion at an intermediate political level within the French Defense Ministry to determine whether this portends some new French interest in strategic coordination. Further guidance on how to deal with this initiative is definitely needed, whether in a new NSDM or some other form.

4. Soviet ABM Information. The French have raised with us a fairly extensive list of questions about the size and capabilities of the Soviet ABM system. They include questions about warhead, interceptor and radar characteristics, and include the SAM upgrade question. The thrust of the questions, for obvious reasons, is toward defining requirements for French systems which will have to penetrate Soviet defenses. Their interest in this problem again reflects the targeting strategy the French pursue and the priority they attach to it reflects their recognition that penetrating Soviet defenses is essential to the independent viability of their deterrent.
While the French undoubtedly have intelligence information on the
Soviet ABM from their own sources, access to reliable, detailed data on Soviet ABM performance and
characteristics, the French could never be certain that the design of
their systems made them adequate to assure penetration. This in turn
creates serious problems of credibility for their deterrent. For
obvious reasons, therefore, their queries to us on this subject have
been with some urgency.

The U.S. can furnish France substantial amounts of the data they
require without jeopardizing the security of U.S. systems. Indirectly,
one might be able to deduce U.S. design criteria from the level of our
information about Soviet systems, but this would hardly be reliable.
Also, should the information find its way back to the Soviets, it might
be of some tactical advantage to them to know how accurate or inaccurate
U.S. information on their systems is. However, this is a risk inherent in
any technical intelligence exchange with an ally and the information in
question has all been shared with the UK.

The President's new March 9, 1973, guidance

There are no Congressional problems in furnishing this
III. Other Initiatives for Nuclear Cooperation the U.S. May Wish to Consider

A. U.S. Assistance to France in Underground Nuclear Testing. Over and above the assistance we might provide to France in response to their requests in the missile area, there are several other areas of nuclear cooperation and assistance the U.S. might consider offering to France if we judge them to hold particular advantages for us, or as parts of a much expanded policy of general strategic and nuclear cooperation with France. One area which comes readily to mind, because of the problems the French are currently encountering with it, is nuclear testing. The present French atmospheric test program in the South Pacific is subject to severe and increasing political pressures from the nations of the South Pacific Basin. The new Labor Governments in Australia and New Zealand have taken a particularly militant stand against further French testing and some confrontation may be in the offing this summer. The Latin American Governments on the Pacific Coast have been pressuring France on this matter for several years and will undoubtedly step up their efforts with new support from Australia and New Zealand. In this environment, and given the U.S. interest in seeing France adhere to the Limited Test Ban Treaty (LTBT), we may wish to assist France in moving their test program underground. In the following discussion, two alternatives for such assistance are considered.

1. Assist France to Develop an Underground Nuclear Test Program at a French Site. Within the framework of an expanded nuclear cooperation with France, the United States could elect to assist the French in establishing their own underground nuclear test program. Such assistance could be in the form of technical information and know-how derived from our own experience. Areas of assistance could include methods of drilling and nuclear charge emplacement, techniques for preventing the venting of radioactive gases and debris, and means of instrumenting and recording test results. This information is the result of nearly 15 years of U.S. experience and would insure better French underground test programs than if they developed an underground test effort entirely on their own.

The assistance described could provide several specific advantages to France. First of all, the U.S. lost significant portions of data from several early Nevada tests either through faulty containment design or poor data retrieval. If our advice permitted the French to avoid such problems, one estimate of the value to France is a savings of one event or some tens of millions of dollars per year, not counting the impact on any weapons systems programs. Another savings less amenable to estimates is that of avoiding lost time in nuclear weapons development, a savings that could be of some significance given the cyclical nature of the current French test program. Also, such advice could encourage the French to move their program underground to the considerable advantage of their relations with Pacific and Latin American nations.
One political benefit to the United States of such assistance could be the adherence of France to the LTBT, either in principle or in fact through their signature on the treaty. Another benefit would be reduced contamination of the atmosphere by fallout. This should produce a favorable reaction among Latin American and South Pacific nations. Hopefully, this might lead to reduced international pressure for a comprehensive test ban, something the United States cannot accept without adequate verification.

No U.S. test results or weapons design information would need to be included and no Restricted Data or Formerly Restricted Data would have to be transmitted in this assistance. For the most part, such assistance could be provided using unclassified information and technology. However, the technology and U.S. experience is invaluable and would be unavailable to France from any other Western source. Costs to the U.S. of such assistance would be minor, essentially limited to the time and availability of technical personnel, and any adverse public reaction in the event of public disclosure.

Because the Joint Committee takes a special interest in all matters pertaining to testing, it would be prudent to consult with the Joint Committee prior to offering the assistance. The Committee's reaction to this proposal might well depend on whether we insisted that France agree to comply with the Limited Test Ban Treaty. The Committee attaches particular importance to the Treaty and probably would support such assistance if France agreed to comply with the LTBT. On the other hand, the Committee would probably balk at the proposal if we did not secure some kind of French assurance on this score.

If we decide to offer France such assistance, it would be best to approach the French CEA on this matter as a separate item from the nuclear safety talks, in order to give the offer saliency as a major additional U.S. step in the direction of closer U.S.-French relations.

2. Offer France the Use of U.S. Underground Nuclear Test Facilities in Nevada on a Basis Similar to the UK. Another option for assisting France in nuclear matters could be to offer France access to U.S. underground test facilities. This option would provide the French with a test area of known characteristics, a technology base developed over years of experience, and a team of trained and proven test operations personnel. In relation to a French underground program, this offer would avoid the lead time and costs of developing a test site and test hardware as well as reducing transportation distances from France by one-half, relative to a site in the Marquesas. Other advantages to France are comparable to those derived from U.S. technical assistance as described above.
Such an option is technically feasible; in fact, it would parallel in part or in whole the arrangements provided to the United Kingdom by the U.S. For comparison, the current US/UK underground test program assists the UK: (1) by providing test facilities for British weapons, and (2) by exposing British reentry vehicles and components to specified effects from U.S. nuclear device tests. In this latter case, data is not provided to the UK on the U.S. weapon other than to indicate the effects to which the specimens were subjected. In the period 1962-1965, there were five tests of UK nuclear weapons in Nevada for which the United States was reimbursed test expenses of approximately $1 million per test. No UK weapons have been tested since 1965 although one test is scheduled in early 1974 at a programmed cost to the UK of $3 million. In the period from FY 1969 through the end of FY 1973, seven nuclear effects tests of British systems and components will have taken place. UK reimbursements for test facility services in FY 1973 and 1974 will be $10 million and $9 million respectively.

Reimbursement by France to the U.S. would be required to offset the costs incurred by the U.S., but since the U.S. nuclear test program is declining, adding French tests would be to our advantage because it would provide a broader base on which to carry the overhead costs of our own test program. From the point of view of the U.S. test schedule, the declining U.S. program should make it possible to add French tests very quickly. Exposing French components to the effects of U.S. tests would be more difficult in the near term because of the declining number of events and already established U.S. and UK requirements.

From the political point of view, this alternative would offer the U.S. about the same advantages as the previous alternative:

- it would improve prospects for French adherence to the LTBT;
- it could reduce international pressure for a comprehensive test ban treaty;
- it would reduce nuclear contamination of the atmosphere;
- it would probably be supported by Latin American and South Pacific nations

It could also establish a degree of U.S. control or influence over the pace of French nuclear weapons development.

It would, however, also present several complicating factors for both the French and the U.S. First, the Limited Test Ban Treaty forbids assistance to any state in carrying out nuclear tests in forbidden environments (the atmosphere or outer space). Therefore, any assistance provided to the French would have to be clearly limited to underground
testing and have no carryover to other French tests if the French did not cease their atmospheric test program. Secondly, French nuclear weapons would have to be submitted to a U.S. safety analysis prior to entry into this country. Should the weapons prove not to meet our standards, we could not help the French in correcting deficiencies or discussing their designs because of our inability to transmit Restricted Data. In the inspection process the U.S. would learn all the details of the designs and test results of the French weapons.

The Joint Committee would have to be involved in any decision to extend such an offer to France. The reaction of the Joint Committee would probably be negative unless we were able to secure a solid French commitment to abide by the LTBT, probably in the form of their signature of the Treaty itself. Even with that major French move the Committee's reaction might be guarded because of:

- concerns about possible French access to U.S. nuclear information in the test process;
- potential pressures for modification of RD guidelines;
- competition for space and schedule sequence with U.S. and UK events;
- the risk of a French test in the U.S. venting to the atmosphere;
- uncertainty as to whether benefits to U.S. from such assistance were substantial enough;
- lack of coordination of French forces with NATO.

Thus, such an offer might be politically feasible only in the context of a much broader shift in U.S. and French policy of which it was a part.

B. Offer to Negotiate a Nuclear Information Exchange Agreement with France Similar to the One with the UK.

Apart from initiatives in the nuclear testing field, the U.S. could also consider an offer to France to negotiate a nuclear information agreement so that we could exchange RD and FRD information under roughly the same arrangements as we now have with the UK. Our arrangements with the UK, in addition to the underground test program,
on what we know about the successes and failures of French tests, they could benefit greatly from our technical advice and know-how in this complicated field. In particular, we could offer very useful help in reducing warhead yield-to-weight ratios, reducing size and weight of ancillary components such as firing sets (miniaturization), and improving hardening for the nuclear device and its related systems. The French have, however, been very sensitive about their nuclear development, particularly its independence, and they might not wish to become so reliant on U.S. technology and assistance.

For the U.S., any advantage beyond greater knowledge of French nuclear design would probably have to be arranged as a quid pro quo in some other area not directly related. One such area, which is in our interest and might directly help the political acceptability of a nuclear information agreement, would be some form of coordination of French nuclear forces with U.S. forces which will be discussed below. Another potential benefit of such an agreement, if our policy moves in the direction of encouraging the development of a UK-French nuclear force, is that it would put the UK and France on the same footing with us in the nuclear area and could facilitate a U.S. decision to authorize the UK to share its U.S. nuclear data with the French later on.

The risk to our national security in this proposal would be greater than the nuclear testing options because we would be furnishing nuclear design information which was derived from our own experience and would reflect on our own weapons configurations. Major difficulties with such a proposal would present themselves in SALT II, where the Soviets would raise charges that we were attempting to evade the limitations of the existing agreements by building up the capabilities of our allies. For their part, our NATO Allies would probably take a dim view of such a move by the U.S. unless we could point to substantial French movement back into the integrated Alliance structure. The main political problems with this proposal, however, would arise domestically from the Joint Committee on Atomic Energy. These are covered in detail in Part II.
IV. Military Advantages and Disadvantages to the U.S. of Expanding Strategic Assistance to France

Any assessment of the military advantages and disadvantages to the U.S. of expanding our strategic assistance to France must begin with the recognition that the French strategic capability is a reality, and that the French have every intention of taking necessary steps to improve its effectiveness and ability to counter Soviet defensive advances. The French are technically competent and have demonstrated a willingness to commit large resources to acquire nuclear power status. Thus, the question facing the U.S. is not whether to offer or deny France a strategic capability now or in the future. The question is whether it would be in the U.S. interest to help France achieve a more effective force against the Soviets more rapidly and at less cost, and whether U.S. assistance could help maximize the relevance of French strategic forces to the overall U.S. strategic problem. This section of the paper will deal only with the military elements of this problem; the political implications will be covered in Part II.

A. Strategic Considerations

1. Does an Effective, Independent French Strategic Force Enhance Deterrence? In the United States, views on the credibility and deterrent value of small nation nuclear forces range from those who term them expensive and not credible, to those who believe, as de Gaulle did, that only a few weapons are sufficient for deterrence. It is the general conclusion of this study that the French strategic force as presently constituted has some degree of deterrent credibility vis-a-vis the Soviets and should gain additional credibility in the future as it increases in size, effectiveness and survivability.

The French make no secret of the fact that their force is designed in the first instance to deter Soviet attacks on France proper; either direct strategic nuclear attack in conjunction with a general exchange with the West, or conventional/nuclear attack in the event of the failure of NATO defenses in Germany. Secondarily, the French have argued their force has deterrent value for Europe generally because it provides Europe a nuclear decision authority separate from the U.S. which can help keep Europe safely insulated from bilateral U.S.-Soviet disputes.

If the French adhere to their declaratory strategy and execute a pre-emptive strike, their current forces have a credible capability to threaten Their current-missile force would be just large enough to overcome the assuming a near-zero failure rate, and some of their Mirage bombers might penetrate the dense As a second-strike deterrent, however, the French force will not be very convincing until the full five boat submarine force now programmed is deployed. The soft land-based missiles, bombers and missile submarines in port would be especially
vulnerable to Soviet pre-emptive attack, and the noise level of the current French submarines at sea might enable the Soviets to eliminate one or more of them with ASW weapons. The surviving missile force would not be constrained by the limits of the ABM Treaty, however, the advent of three more French submarines and some hardening of the land-based systems would give France a limited second-strike credibility. Enlarging the submarine force, MIRVing, or adding penails to their missiles would considerably increase their retaliatory deterrent.

In providing deterrence for France itself, we conclude the French strategic force may have its greatest value in cases in which France would wish to separate itself from a U.S./NATO conflict and give the Soviets reason to respect their disengagement. The French forces have some value from a collective point of view in deterring Soviet attacks on NATO to the extent they add to total Western capabilities and to the degree they increase Soviet uncertainty about the level of coordinated or uncoordinated NATO response. In scenarios involving any general nuclear exchange between the U.S. and the Soviet Union, there is a question whether the French force would deter the Soviets from including French targets in their overall first strike.

From the point of view of the U.S., therefore, it would appear that French forces add somewhat to the Western deterrent at present because of the uncertainty factor they contribute to Soviet planning in advance of any attack on NATO. In other scenarios, the deterrent value from our perspective is either neutral or negative.

2. Does an Effective, Independent French Nuclear Force Create Crisis Control/Escalation Problems? In times of high international tension, an independent French nuclear force could pose serious problems. Uncertainty as to French intentions, priorities and doctrines becomes the mutual concern of Moscow and Washington. Accordingly, in a crisis involving only the USSR and the U.S., with no French interests involved, France would probably try to use its nuclear forces to keep France out of the conflict. In this scenario, the French forces would not pose serious problems for us. In this circumstance, the French forces would be maintaining a neutral low-key posture. For their part, French leaders would be seriously concerned over the U.S.-Soviet bilateral crisis because of the risk of a Soviet pre-emptive attack on French forces as part of a Soviet assault on the U.S.
Of greater concern is the uncertainty surrounding French nuclear forces in a NATO contingency. In this scenario, it might even precipitate a general theater-wide Soviet response.

On the other hand, it can be argued that an identifiable French first use of tactical nuclear weapons if Soviet-Warsaw Pact forces crossed into Western Europe, ahead of any U.S.-NATO use, might be militarily advantageous to NATO and the U.S. This initial French use could create an atmosphere conducive to political-diplomatic conflict resolution. It might force the Soviets to re-evaluate their objectives and provide some freedom of political maneuver for ourselves. However, depending on whether or not the Soviets could identify the source of the attack, they might well interpret the French tactical nuclear initiative as presaging a more general NATO decision to use theater nuclear weapons and decide to launch a pre-emptive tactical nuclear strike across the entire central front.

If the French nuclear initiative were strategic not tactical, particularly if it took the form of an SLBM attack on a Soviet city, it could well be regarded by the Soviets as a rapid U.S.-NATO escalation to general war since they probably could not identify the nationality of the launching submarine. Faced with this uncertainty about the origin and implications of the attack, they might decide to launch their own general war strategic attack on the U.S. and NATO.

Another complicating factor from the point of view of U.S. strategy is that French

conceivably it might even produce a spasm Soviet strategic response against the U.S. and NATO. For this reason alone, if no other, some degree of U.S.-French strategic coordination in a crisis is of utmost importance.

In any case, a completely independent French nuclear force must be evaluated as generally

\[\text{[NLN 00-T/8: p. 35]}\]
We conclude that, as opposed to the limited military advantages derived from the deterrence provided by an independent French nuclear force,

3. How do French Strategic Forces Relate to British Nuclear Forces? The UK has deployed a viable strategic force

At the strategic level there has been much discussion of the possible advantages of a

Leaving aside the political pros and cons for Part II of this study, we
note that the possible military advantages center on

Indeed, in the
design of their Super Antelope modification to the present POLARIS RV,
they have quite explicitly acknowledged that their design criterion is

and

presumably have a far better claim to independent deterrence.

The British might find
From the point of view of the U.S., a coordinated UK-French force would be advantageous only in the latter circumstance.

On balance, therefore, we conclude that a

4. When Deterrence and Crisis Control Fail: Implications for the U.S. Targeting Problem. Should deterrence fail, and should attempts to control a crisis also fail,

In the analysis which follows, we address the impact of French nuclear forces on the U.S. targeting problem in terms of minimum (current), moderate (planned), and maximum (expanded) French forces (see Table A), relating these to conditions...
Complete French cooperation in... but it is extremely unlikely given current French policy. Some minimum amount of information exchange on problems of... A practical benefit would be... However, the potential problems presented by a future French nuclear capability could have significance if the French continue to pursue an independent course. By the 1980s, when the French could have 597 RVs, the...
B. Other Military Considerations

1. Impact on NATO Conventional and Nuclear Strategy. French nuclear forces, even at the projected maximum level, will not have profound new effects on NATO strategy. Although future French forces should have a higher deterrent value in Soviet eyes, and will be a more complicating crisis control factor for ourselves, unless France goes beyond the maximum force, it will not have sufficient numbers of warheads and delivery vehicles to require either the NATO allies or ourselves to reconsider the strategy of flexible response.

The French nuclear forces, today or in the future, however, may be able to...

2. Implications for U.S. Forces Deployed in Europe. French nuclear forces, strategic or tactical, will not have a direct impact on the numbers of U.S. forces required in Europe unless the French forces are fully reintegrated into NATO. Under conditions of full integration, it might be possible to substitute French delivery units, particularly tactical systems, and return an equivalent number of the U.S. delivery units to the United States. However, the political prospects for full integration of French forces are poor. Moreover, integration of the two systems would be extremely difficult due to differing capabilities. We conclude that substitution is not a likely alternative.

An increase in the French tactical nuclear capability to projected maximum strength * would not seem to permit reductions in troop strengths, either for French Army units or our own. Without getting into the continuing discussion on whether tactical nuclear weapons require more,
or permit fewer, ground units, our judgment is that the projected size of
the French tactical forces would be insufficient to have noticeable
effects either way.

What does seem important is that French tactical nuclear forces,

C. Military Trade-offs for Further U.S. Missile Assistance.

We noted previously that U.S. assistance to French nuclear and missile
programs could bring them to fruition sooner and less expensively. But the
French can be expected to proceed with the programs even without our
assistance. This means that the military advantages and disadvantages
of an enhanced French nuclear force, as described above, will be with us
eventually whether we like it or not.

In these circumstances, the key issue is what we might gain that would
make it worthwhile to assist in the French program. What do the French
have to offer militarily that we want in return for our further assistance?
In evaluating these possibilities we must remember that the kind of
technology transfer we are engaged in with France is irreversible, whereas
any French reciprocity is likely to be either transitory in value or
conditional in nature. Furthermore, cooperation of the kind we are now
engaged in develops a momentum of its own which makes it more and more
politically difficult to reverse or terminate as time goes on.

The previous discussion emphasizes that...
regarded as a material contribution to our conventional posture in Europe. It would enhance the deterrent value of our conventional posture in Europe in the eyes of Soviet-Warsaw Pact planners. It would be militarily advantageous, therefore, to make arrangements with the French for a wartime LOC. We consider that this might be a useful but not sufficient quid to seek from the French in return for our further assistance.
EXEMPT