



OFFICE OF THE DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING
WASHINGTON, D. C. 20301

December 6, 1974

MEMORANDUM FOR THE SECRETARY OF DEFENSE

SUBJECT: Ballistic Missile and Nuclear Safety Programs -
INFORMATION MEMORANDUM

~~(TS)~~ This memorandum summarizes the current status of our Ballistic Missile and Nuclear Safety programs with the French — carried out under the basic authority of NSDMs 103 and 104 respectively.

~~(TS)~~ I. MISSILE PROGRAM

A. BACKGROUND

The program initiated in response to NSDM 103 (29 March 1971), by signed agreement dated October 1971. Subsequent guidance for moderate expansion contained in Kissinger memorandum to SecDef of March 9, 1973 (Atch 1). The agreement was to help improve operability and reliability of "existing" French systems. "Existing" was defined to include non-MIRV missiles up through the [redacted] land based system, due to deploy in about 1980. (See attachment 2 outlining French ballistic missile programs.)

Each side has designated a single-point-of-contact. U. S. contact is Mr. G. R. Barse, in ODDR&E.

Our assistance has included information pertaining to specific problems in areas such as rocket propulsion, electrical systems, gyros, hydraulics, materials, safety, nuclear effects and hardening, [redacted]

[redacted] Most significant to French have been the efforts on nuclear hardening, propulsion, materials, and intelligence.

The greatest single area of French interest has been hardening the reentry vehicle of the [redacted] sea-based missile to nuclear effects. [redacted] is France's first ballistic missile equipped with a thermo-nuclear warhead, and will deploy in late CY 1976 or early CY 77.) Our comments

per sec 3.3(b)(4)(5)

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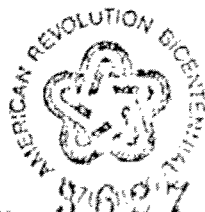
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E.O. 13526, Section 3.5

NLN 01-11/5B per sec 3.3(b)(4)(5)(6), ltr 9/16/2010
By 393 NARA, Date 11/4/2010

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and information have helped them realize a much better design much more quickly than otherwise they might have done. For example, we were told in September, 1974, that for the [REDACTED] RV alone, we had saved them "two years and 60 kilograms weight." The 60 kilograms (132 lbs) would equate to either an equal amount of added payload capability, or approximately 200 miles added range.

There is no doubt that this program has been extremely helpful to France. The above "two years and 60 kilograms" remark is but one example. M. Delpech, the French Ministerial Delegate for Armament, told us in September, and again in November, that the program had been a great help to France, and he was extremely grateful. In November, as a token of his gratitude, he offered to make available to us any part, or all, of the results of their atmospheric nuclear tests in the Pacific — without asking anything of us in return. A payment for past favors was the connotation. (Mr. Barse thanked him for the offer, but said he was not sure whether we would be allowed to accept, in view of possible Test Ban Treaty limitations.)

Under current guidance we are continuing to assist with the [REDACTED] and [REDACTED] missile programs.

~~(TS)~~ B. POSSIBLE PROGRAM EXPANSION

When you met with M. Galley in September, 1973, you discussed six possible areas of program expansion:

- Atomic assistance ("negative guidance" in choosing the approach to design of the [REDACTED] for their thermo-nuclear warhead).
- MIRV advice/assistance (primarily for the hoped-for [REDACTED] MIRV, but surely anticipating similar cooperation on the [REDACTED] sea-based MIRV).
- Penetration aid assistance.
- Underground test assistance (UGT).
- Comparison/critique of analytical techniques and results.

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- Strategic warning advantages/technology.

The first four of the above were of most interest to France. We have taken no action to implement any of these and the subject has lain essentially dormant. The first has now been overtaken by events (as has been the [REDACTED] MIRV, though not the [REDACTED] and the French have lost most of their interest in the third. The fourth, on UGT, is still of interest and still important. It has been raised recently in meetings with both Mr. Barse and Mr. Cotter. The fifth may be of value to us in understanding their strategic rationale. The last could be of potentially significant interest to them, if we educated them enough to realize its value.

Should we wish to expand cooperation, there are several areas currently predominant in French interest:



- Assistance with the development of their [REDACTED] MIRV missile. They clearly recognize the sensitivity of MIRV, so it is doubtful that they would couch a request in such blunt terms. Rather, they probably would ask for assistance in solution of selected problems which, if one looked beneath the surface, would be seen as applicable in some way to their [REDACTED] effort.
- Assistance in analysis of "scenarios of aggression." The intent of this is not clear to us and the French are currently attempting to define this more clearly.

In addition to these, we probably could develop considerable enthusiasm for exchanges in strategic warning, should we wish to do so. A related area of possible interest would cover strategic command and control, and mechanisms for insuring the integrity of their launch command channel.

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per sec 3.3(b)(4)(5)(6)

~~(TS)~~ C. POLITICAL AWARENESS IN FRANCE

At a meeting on November 7, 1974, M. Delpech stated that he had quite recently briefed the President, Giscard, on the missile program. He stated that Giscard was very pleased at the results and told him (Delpech) to proceed as he had planned, giving him a "completely free hand" in conduct of the program for France. Giscard noted that security was paramount, that he wanted no formal reports made to him (only periodic informal briefings), and that neither the Prime Minister nor the Minister of Foreign Affairs was to know of the program, to insure greater security. Delpech advised us that neither of these two does know.

~~(TS)~~ D. IMMINENT ACTIONS

The program is continuing under the current guidelines, with the next meeting scheduled for mid-January in Paris. There have been indications that Giscard may wish to raise this general subject in his meeting with President Ford. M. Delpech promised to provide us with a copy of any pertinent agenda ahead of time. None has been received to date, but a special visit by one of the French team is scheduled for the week of December 10, and we have been told that he hopes to be able to bring agenda details with him. They will be forwarded to you immediately, if actually received.

~~(TS)~~ II. NUCLEAR SAFETY PROGRAM

A. BACKGROUND

The basic authority is contained in NSDM 104 (29 March 1971), with implementing agreement between U. S. and France signed in June, 1972. The program calls for "exchange of unclassified and classified information relating to nuclear safety up to, but not including Restricted Data. Information on nuclear safety standards, safety devices and procedures, safety design and command and control arrangements can be shared with the French consistent with the above security limitation."

- Each country has designated a single-point-of-contact. U. S. contact is Mr. Don Cotter, ATSD (AE).

There have been five meetings in connection with this program, all of them in consonance with the established guidance above. There has been no program expansion subsequent to the original NSDM 104.

- French have indicated they are well pleased with the results of the exchanges to date, believe they have been extremely fruitful, and would like them to continue.

B. POSSIBLE PROGRAM EXPANSION

At the last meeting in Paris (November, 1974) the French proposed three areas for future discussion:

- Continuation of previous discussions on central control of nuclear weapons.
- Continuation of discussion of protection against terrorist attacks.
- Discussion of safety aspects of underground tests.

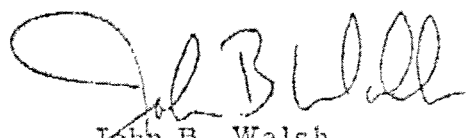
Certain aspects of the first two items amount to a continuation under current guidance, while other aspects appear to constitute program expansion. The third item is clearly an area of expansion. No commitment has been made on the areas of expansion.

The subject of assistance with underground tests has been raised in both cooperation channels - missile and nuclear safety - with different aspects of the problem posed in each. (A similar approach was made to Gen. Giller of the AEC, who feels that the AEC should lead this action.) The U. S. approach, if such expansion is agreed to, must be a coordinated one between our two programs. We will work out such a coordinated approach at such time as it becomes appropriate, involving the AEC for technical assistance as required.

~~(TS)~~ III. STATUS OF EXPANSION

Although we have had proposals for program expansions, we have taken no specific action in respect to their implementation, or requests

for approval, based upon the belief that any move in this respect prior to President Ford's upcoming meeting with the President of France would be premature.



John B. Walsh
Deputy Director
Strategic and Space Systems

- 2 Attachments
1. Memo, Mar 9, 1973
2. French Bal Msl Progs

Prepared by: MR. G. R. BARSE, 74910

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March 9, 1973

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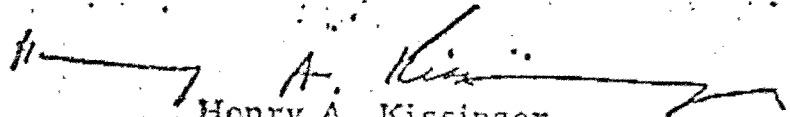
THE SECRETARY OF DEFENSE

SUBJECT: US Assistance to the French Missile Program

The President has directed the Department of Defense to proceed on an interim basis with limited assistance to France in the areas of (a) information on nuclear effects simulator types, characteristics and usage; (b) the sale of small simulators; (c) general hardening technology applicable to missiles, reentry vehicles and silos; and [redacted]

All information passed to France on [redacted] should be developed jointly by the Director of Central Intelligence and the Department of Defense.

This authority for proceeding with limited assistance will remain valid until a basic study has completed and new Presidential guidance has been issued.


Henry A. Kissinger

cc: The Secretary of State
Director of Central Intelligence

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ATTACH # 1

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FRENCH BALLISTIC MISSILE PROGRAMS

<u>Missile</u>	<u>Description</u>	<u>Deployment Status</u>
■	Submarine-based - solid propellant, single RV fission warhead ■ Range, approx 1300 nm.	Currently deployed on 2 submarines
■	Same as ■ except new second stage motor. Range, approx. 1550 nm.	Begin deployment in 1974 to be backfitted vice M1
■	Submarine based. Major redesign. <u>First</u> missile with thermo-nuclear warhead (single RV). <u>First</u> missile with nuclear hardening and decoys. Same range as ■	Late CY 76 or early 77
■	Submarine based. Completely new missile. Presently planned as MIRV. Characteristics now under formulation. Will be hardened.	1984
■	Land based, single RV, fission warhead ■ no nuclear hardening. Range approx. 1600 nm.	18 now deployed.
■	Land based. Single thermo-nuclear warhead (same as ■ Nuclear hardening, decoys and chaff. Possibly increased range.	1980

From the above list, the ■ has been considered a future system. All others have been treated as "existing." In practice, the actual problems we have discussed have been directed specifically at the ■ primarily, although the generality of the problems, and the considerable degree of commonality employed by the French in their various missile types, makes the assistance more widely applicable. They readily acknowledge this.

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