

MEMORANDUM

NATIONAL SECURITY COUNCIL

URGENT ACTION

May 24, 1973

~~TOP SECRET/SENSITIVE~~

*Let me call
Cormac that
papers coming*

MEMORANDUM FOR:

DR. KISSINGER

FROM:

PO Phil Odeen/Hal Sonnenfeldt *BS*

SUBJECT:

U. K. Questions on Polaris

In London, the U. K. raised a number of questions on the options for upgrading their Polaris force. They presented several of these questions in the form of a short paper and others arose during the discussion. Our earlier memo on these questions and the U. K. papers are at Tabs B and C. You promised a U. S. response to the U. K. questions within two weeks.

We have prepared a paper which responds to the questions raised by the U. K. (Tab A). The paper discusses in some detail the U. K. assessment of the Soviet ABM which we found to be misleading. Their assessment appeared written to justify a Super Antelope conclusion and our paper tries to provide a more balanced view. The paper was reviewed by Jim Schlesinger and his comments are incorporated.

Since the U. K. may decide between the Poseidon and the Super Antelope in the next few weeks, we need to turn our attention to development of a game plan for handling the U. K. request. If they request sale of Poseidon we will need:

- Presidential determination to sell MK III re-entry vehicle under the Atomic Energy Act, which is then submitted to the Congress.
- Consultations with the Joint Committee. Key members include Pastore, Jackson, Price, Anderson, and Holifield, and we would probably want to advise them in advance of the determinations.

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DECLASSIFIED

E.O. 12958, as amended, Sect 3.5

NLN 01-33/9 per sec 3.3(b)(1)(c) Ltr 4/13/2010

By *RS* NARA, Date 5/21/2010

[63/7/17]

- An Executive Agreement stating the sale is pursuant to Article IV of the Polaris Sales Agreement. (This would not require any Congressional approval.)
- Allied and Soviet consultations.

If they request continued assistance on Super Antelope or sale of Poseidon boosters for STAG, we will face similar requirements.

In any case, we will need to be extremely cautious and urge the tightest secrecy on the U.K. so as to avoid leaks before or during the Brezhnev visit.

* * * * *

We have recently learned that the OSD official who handles the U. K. Polaris/Poseidon matters (G. R. Barse) has been talking extensively to the U. K. on this subject. He has previously told them that the U. S. would never sell Poseidon to the U. K. and last Friday announced to a meeting of U. S. and U. K. technical officials that the White House was preoccupied with Watergate and has delegated "full responsibility for this matter" to OSD (meaning him). Such irresponsible talk is disturbing and we recommend you:

- Tell Sikes and Cromer to ignore Barse and suggest their people avoid him unless absolutely necessary.
- Mention these incidents to Jim Schlesinger or Bill Clements and suggest they get some discipline in their staff on such matters.

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May 24, 1973

This paper responds to further questions raised in our continuing discussions regarding your request for US support and assistance in maintaining the credibility of the UK FBM force:

Assessment of Russian ABM Defense

1. We believe you misconstrued Dr. Schlesinger's remark that the

UK deterrent [REDACTED]

2. The implication of your discussion is [REDACTED] before the superior penetrability of the POSEIDON MK-III re-entry system is evident. One might be led to believe that [REDACTED] SUPER ANTELOPE and POSEIDON are of equal effectiveness. If this is intended in the discussion in paragraphs 1-7 of your paper, we would disagree.

3. The penetration capability of British missiles employing the SUPER ANTELOPE concept

[REDACTED] Any of a number of possible developments could bring

[6/27/73]

per sec 3.3(b)(2)(D)

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Lead 4 British Embassy
5/21/73

This paper responds to further questions raised in our continuing discussions regarding your request for US support and assistance in maintaining the credibility of the UK FBM force:

Assessment of Russian ABM Defense

1. We believe you misconstrued Dr. Schlesinger's remark that the

UK deterrent "might lack credibility in three to four years."

The US does not believe and has never suggested that a Soviet terminal ABM defense comparable to the US SPRINT

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PER 3.3(b)(2)(D)

2. The implication of your discussion is that the Soviets must deploy an ABM comparable to the US SPRINT before the superior penetrability of the POSEIDON MK-III re-entry system is evident. One might be led to believe that against ABMs less capable than SPRINT, SUPER ANTELOPE and POSEIDON are of equal effectiveness. If this is intended in the discussion in paragraphs 1-7 of your paper, we would disagree.
3. The penetration capability of British missiles employing the SUPER ANTELOPE concept could be threatened within a few years by Soviet ABM developments. Any of a number of possible developments could

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this about. As we understand it, the SUPER ANTELOPE concept is predicated on the assumption that credible exoatmospheric penetration aids can be deployed from a modified POLARIS missile. These penetration aids, together with planned hardening of the RVs, are intended to exact an exchange ratio of several [REDACTED] for each POLARIS/SUPER ANTELOPE missile as compared to the expected one-to-one ratio of the existing POLARIS. Achievement of this increased exchange ratio is dependent on: (1) the credibility of the penetration aids in simulating the re-entry body signature and; (2) their continuing credibility to an altitude comparable to [REDACTED]

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[63/1/20]

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bring this about. As we understand it, the SUPER ANTELOPE concept is predicated on the assumption that credible exoatmospheric penetration aids can be deployed from a modified POLARIS missile. These penetration aids, together with planned hardening of the RVs, are intended to exact an exchange ratio of several GALOSH interceptors for each POLARIS/SUPER ANTELOPE missile as compared to the expected one-to-one ratio of the existing POLARIS. Achievement of this increased exchange ratio is dependent on: (1) the credibility of the penetration aids in simulating the re-entry body signature and; (2) their continuing credibility to an altitude comparable to the commit altitude of the ABM interceptor. Relatively simple modifications to the GALOSH missile to incorporate a "loiter" capability or substitution of an ABM interceptor with higher acceleration than GALOSH (but in no sense comparable to SPRINT) could allow the commit time to be delayed until atmospheric filtering had negated the effect of the penetration aids. The US believes such improvements in USSR ABM capability are feasible within a few years. The US also believes that surface-to-air missiles could feasibly be upgraded to

[REDACTED]
[REDACTED]
SANITIZED pep 3.3(b)(1)(2)(4)(6)(8)

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[REDACTED]

4.

[REDACTED]

Additionally, the

POSEIDON MK-III re-entry vehicle is less visible to radar and re-enters at substantially higher velocity. This compresses the time available for detection, tracking, launch and intercept increasing the likelihood of penetration of the MK-III.

[REDACTED]

[63/7/21]

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aids. In addition, improvements in Soviet ABM sensor technology (better radar discrimination or use of IR sensors) could negate the effectiveness of SUPER ANTELOPE penetration aids.

- 4. The above cited modifications and upgrades are less technically demanding than a SPRINT-type system and for that reason are judged as more likely in the near term. In some cases (e.g., improved radar discrimination of decoys) Soviet ABM capabilities are dependent on factors such as computer capability and software

SANITIZED per 3.2(b)(1)(6)

[REDACTED]

In all of these cases, the

POSEIDON MK-III re-entry system provides high confidence penetration of the postulated ABM defense.

[REDACTED]

Additionally, the

POSEIDON MK-III re-entry vehicle is [REDACTED]

[REDACTED]

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the time available for detection, tracking, launch and intercept increasing the likelihood of penetration of the MK-III. This last feature is of importance in consideration of SAM upgrade where large numbers of interceptors with marginal ABM capability could be deployed.

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PER SEC 1.3A(3)(D)

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5. The US fully endorses the statement in paragraph 7 of the British paper that the only high confidence tactic for penetrating ABM defenses is by providing more incoming warheads than the number of defensive missiles. The US believes that penetration aids are

[REDACTED]

6. In addition to the general comments above, there are a few specific areas where we may not have made ourselves sufficiently clear during the March discussions.

7. [REDACTED]

But this latter point is irrelevant

[63/7/22]

per sec 1.100(100)

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5. The US fully endorses the statement in paragraph 7 of the British paper that [REDACTED]

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per 3.3(b) (4%)

[REDACTED]

[REDACTED] The US believes that penetration aids are invariably sensitive to technical details of the design of enemy ABM defenses. Since some of these technical characteristics may never be known with certainty, one cannot have high confidence that penetration aids will permit successful penetration of enemy ABM defenses.

6. In addition to the general comments above, there are a few specific areas where we may not have made ourselves sufficiently clear during the March discussions.

7. In paragraph 3, lines 7-9, you state there is no evidence of the "entirely new radar system that a terminal defense would require." The US did not indicate that an "entirely new radar system" would be required for a terminal ABM. We believe existing radars, in particular, the new ones under development, could in fact be used as part of a terminal ABM. We did state in March

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per 3.3(b)(1)(c)

[REDACTED]

But this latter point is irrelevant

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to considerations of terminal ABM defense since chaff does not penetrate the atmosphere.

8.



9. We note that the sea-operating room question was not addressed. This was thought by us to be of concern to you if you implemented the SUPER ANTELOPE program. Calculations discussed in the February meeting showed that the POSEIDON MK-III payload provided a factor of 3 greater operational room over the SUPER ANTELOPE option. As we understood the STAG program, the range of the SUPER ANTELOPE-type payload on POSEIDON would provide about the same range as the current POLARIS.



[63/7/23]

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to considerations of terminal ABM defense since chaff does not penetrate the atmosphere.

8. Your suggestion in paragraph 4 that it would take the Soviets 12 years to develop a SPRINT-like system is not felt to be appropriate. The 12 years expended for the US SPRINT development was due largely to non-technical factors such as changing program goals, extended policy deliberations and fiscal constraints. Most US projections of Soviet forces anticipate Soviet capability to deploy a SPRINT-like system

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per 3.3(b)(1)(v)

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Maintenance Support for POLARIS and POSEIDON Missiles

10. The US affirms that the assumptions stated in paragraph 8 of the British paper are consistent with current US planning. We now plan to replace the 10 older POLARIS submarines with TRIDENT submarines beginning in the late 1970's. All POLARIS submarines would be phased out by 1982 or 1983. (There is, of course, the possibility of retaining POLARIS beyond that date if the TRIDENT program is significantly delayed or a decision is made to expand our strategic forces or phasedown land-based systems.)
11. The US now plans to retain POSEIDON in the force for the indefinite future. The US may deploy the TRIDENT I missile in some of its POSEIDON submarines but it does not envision that all 31 POSEIDON submarines would carry TRIDENT I.

POSEIDON Procurement Under the POLARIS Sales Agreement

12. The US has examined the POLARIS Sales Agreement and is of the opinion that Article IV provides sufficient authority for the sale of the POSEIDON Weapon System (less warheads) to the UK. The US is prepared to so interpret and apply Article IV to this end should the British so request.

[63 / 7/1/34]

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Availability of MK-III RV Technology

13. The President is authorized to make a statutory determination to offer sale of restricted data design information and hardware for the POSEIDON MK-III RV to the UK under the Atomic Energy Act. The President is required to notify the Congress of such determination and unless disapproved by a Concurrent Resolution, the determination is automatically approved after 60 working days elapse. (The Joint Committee on Atomic Energy can waive this waiting period. We would anticipate approval.)

POSEIDON Production Status

14. The US will make its final procurement of many components of POSEIDON missiles and weapon system equipments in July and August of 1973. Over the next year or two US POSEIDON production lines will begin to shut down. The earliest and most important production line involves critical components for the MK-III RV and will start to shut down in September 1973. As we stressed in the March 9 meeting, delay of a request for POSEIDON beyond September will result in increasing costs in reestablishing production lines.

[63/7/25]

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Impact of Strategic Arms Agreements

15. The US does not anticipate that possible US Soviet strategic arms limitations will impact any of the UK options. We have rejected Soviet demands for a ban on transfer of strategic offensive weapon systems. We are not proposing limitations on SLBM MIRVs. Further, we do not anticipate a comprehensive test ban which would preclude UK development and test of a MK-III type warhead for POSEIDON.

[63/7/26]

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