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WEAPONS SYSTEMS EVALUATION GROUP

400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202

4 August 1971

701.510(5-13-67) Sec 5.1.1.1 300517

Report # 166 Copy 3 of 3 copies
336 WSEG

Title: WSEG Report 166, "Strategic Weapon Systems Study 1975-1981 (U)," August 1971.

Conducted by: WSEG

For: JCS

This report completes the response to SM-92-70, 12 February 1970. This phase of the study concentrates on issues deferred or only partially covered in Phase I (WSEG Report 154). Those issues include potential Soviet ASW capabilities and U.S. countering SLBM options; U.S. defensive capabilities including air defense options, advanced ABM systems (beyond SAFEGUARD) and ASW in close-in areas; and a preliminary analysis of U.S. capabilities to control and execute strategic forces.

(U) Purpose: To study the implications on U.S. force effectiveness of significant changes in the capabilities and effectiveness of Soviet and CPR strategic forces, which are possible in the period extending through 1981, and evaluate the suitability of alternative U.S. strategic postures for countering adverse changes in the threat and for achieving U.S. military objectives.

Methodology:

1. Strategic force options for the period 1975-1981 are related to a range of postulated U.S. military objectives. Deterrence is accepted as the foundation of current and future U.S. policy, but reference is made to retaliatory, defensive, and war fighting postures to establish and evaluate alternative military postures.

(b)(1)

2. Since the evaluation of system options and alternative U.S. postures involves projections of enemy capabilities a decade or more in the future, the analyses deal with a spectrum of enemy capabilities that include the official estimates but also extend beyond them. This study endeavors to establish the sensitivity of a system option to changes in the threat. General conclusions are drawn concerning the effectiveness of the alternative U.S. force postures both within and beyond the range of current intelligence.

Principal Findings:

1. Current projections of Soviet offensive capabilities in the middle to late 1970's represent a serious threat to existing and programmed U.S. land-based offensive forces and the SAFEGUARD defenses being deployed. Immediate improvements, in the form of further hardening of existing MINUTEMAN silos, rebasing of bombers to interior bases, and the introduction of bomber carried long range air-to-surface missiles or decoys appear indicated.

2. For MINUTEMAN, a range of options that could contend with the highest projections of Soviet offensive forces possibly devoted to MINUTEMAN attack and even force buildups beyond that (possibly up to 5,000 to 10,000 RVs) include hard site defense of silos and mobile and semi-mobile basing schemes. The highest projections for USSR defensive forces require that U.S. bombers use more air-to-surface missiles and/or decoys to attack and dilute the increasingly capable Soviet area defenses. In addition, continued buildup of Soviet terminal defenses beyond those now projected would require large numbers of high performance missiles to attack or penetrate this element of Soviet defense. The B-1A, with its increased weapon carrying capability and improved low altitude performance would be an effective carrier of such missiles.

3. While no threat to the prelaunch survivability of the current POSEIDON force has been identified that is clearly feasible prior to the early 1980's, the U.S. cannot be certain that such threats will not develop in this time period. Two options for rapid response to a suddenly perceived threat to the prelaunch survivability of the POSEIDON force are:

(b)(1)

4. While a posture which can satisfy the U.S. objective of defending the population against a determined USSR attack cannot be achieved in this time period, due in large part to the inability to provide ABM defenses against a large-scale Soviet missile attack, postures which satisfy lesser but worthwhile objectives can be achieved. The study of U.S. air defense indicates that a system consisting of OTH-B radars and/or AWACS and interceptors, which was structured to provide warning and surveillance capability, would also provide defense against limited or accidental attack, and against N^o Country attack. The deployment of terminal defenses at the NCA and other key nodes critical to the execution of U.S. strategic forces could offer increased deterrence against Soviet bomber or sea-launched cruise missile attacks. The 12-site SAFEGUARD system, and advanced area systems beyond SAFEGUARD, could provide defense against a limited or accidental missile attack, and against a CPR attack not including credible exoatmospheric penetration aids.

5. The preliminary study of U.S. control and execution capabilities indicates that some degree of increased flexibility in the employment of offensive forces might be achievable but that the systems likely to be available during this decade would fall far short of providing for trans-attack or post-attack planning and retargeting. Further analysis is needed to determine essential requirements for the various control and execution postures against which the technological capabilities of existing and proposed sensor systems, command centers, and communications systems may be assessed with the goal of finding the balance between flexibility and simplicity of execution.

6. Future prospects for defensive and warfighting postures may be improved through heavier R&D commitments in the coming decade. However, at the present time, neither concept nor system has been identified that could support a basic shift in U.S. strategy from one of prime emphasis on offensive and retaliatory forces.

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THE JOINT CHIEFS OF STAFF
WASHINGTON, D. C. 20301

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SM-705-71
5 November 1971

701,510(5-13-67)SEC:

MEMORANDUM FOR THE DIRECTOR, WEAPONS SYSTEMS
EVALUATION GROUP

*REPORT 166
SM 705-71
334 JCS
334 WSEG
701,510*

Subject: WSEG Report 166: Strategic Weapon Systems
Study 1975-1981, Strategic Force Options for
the Late Nineteen Seventies and Early Eighties

1. Reference is made to WSEG Report 166, dated 4 August 1971,
subject as above.

2. On 4 November 1971, the Joint Chiefs of Staff approved
the comments in the Appendix hereto for inclusion as the
preface to Volume I: Final Report of WSEG Report 166. It is
requested that these comments accompany any additional distri-
bution of the report.

3. Without attachment, this memorandum is UNCLASSIFIED.

For the Joint Chiefs of Staff:

William P. Cantwell, Jr.
WILLIAM P. CANTWELL, Jr.
Captain, USN
Deputy Secretary

7 MAR 1974 INVENTORIED

Attachment

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APPENDIX
COMMENTS BY THE JOINT CHIEFS OF STAFF
ON WSEG REPORT 166

	<u>1</u>
	<u>2</u>
	<u>3</u>
1. (IS) There are important cautions which must be observed	<u>4</u>
to avoid making erroneous conclusions when using the report.	<u>5</u>
For proper understanding, the principal findings and con-	<u>6</u>
clusions as summarized in Volume I of the report must be	<u>7</u>
evaluated in context with the purpose of the study. Foot-	<u>8</u>
notes and explanatory comments in the report must be carefully	<u>9</u>
noted to insure complete understanding of each discussion.	<u>10</u>
Following are specific comments:	<u>11</u>
a. As noted in the comments by the Director, Weapons	<u>12</u>
Systems Evaluation Group, the study frequently adopts worst	<u>13</u>
case estimates of Soviet capabilities in analyzing the	<u>14</u>
effectiveness of individual weapons or force elements.	<u>15</u>
b. The Joint Chiefs of Staff note that alternatives are	<u>16</u>
considered that deemphasize elements of the strategic	<u>17</u>
offensive forces. While it is circumspect to review a range	<u>18</u>
of alternatives for analysis, the Joint Chiefs of Staff believe	<u>19</u>
that a force-mix of mutually supporting forces--land-based mis-	<u>20</u>
siles, sea-based missiles, and bombers--should be maintained.	<u>21</u>
c. The study does not analyze the impact on sea-based	<u>22</u>
systems of Soviet high-threat forces, although this was	<u>23</u>
done in the case of land-based forces. The lack of these	<u>24</u>
additional analyses precludes a balanced report.	<u>25</u>
d. The study concludes that, in the absence of an effec-	<u>26</u>
tive ballistic missile defense of US cities, there seems to be	<u>27</u>
no reasonable justification for a damage-limiting air defense	<u>28</u>

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capability beyond that provided by configurations 1
designed for lesser objectives, such as the deployment of 2
terminal defense for the National Command Authorities and 3
other key points and a thin area defense against limited or 4
Nth country bomber attacks. The Joint Chiefs of Staff 5
believe that failure to provide for a defense against air 6
attack would increase the flexibility available to the Soviets 7
by providing a range of attractive and relatively inexpen- 8
sive options against the United States employing bombs, air- 9
to-surface missiles, or submarine-launched cruise missiles. 10
An effective air defense deployment would deny the Soviets 11
assurance that they could achieve major objectives in their 12
general war plans through the use of air-breathing weapon 13
systems. 14

e. The Joint Chiefs of Staff note that the technical 15
capabilities of the Soviet and PRC offensive forces assumed 16
during Phase I of the study are instrumental to deriving the 17
study conclusions relating to the effectiveness attributed 18
to the SAFEGUARD system. The final phase of the study con- 19
sidered hard site defense of MINUTEMAN but addressed quantita- 20
tively only the terminal element (SPRINT and missile site 21
radar) of the SAFEGUARD deployment in the MINUTEMAN fields. 22

2. (U) The Joint Chiefs of Staff have noted this report and 23
regard it as an addition to the growing body of strategic 24
weapon systems studies. 25

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