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Page 25
At Council

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DEPARTMENT OF THE AIR FORCE
OFFICE OF THE CHIEF OF STAFF
UNITED STATES AIR FORCE
WASHINGTON, D. C.

18 FEB 1959

MEMORANDUM FOR THE CHIEF OF STAFF, USAF

SUBJECT: (U) Vulnerability of SAC Bombers in Early 1960's

1. On 12 February 1959, the Air Force Council considered a presentation by the Deputy Chief of Staff, Operations on the above subject in response to questions submitted by Dr. Killian, Scientific Advisor to the President (TAB A).

2. The Council noted that:

a. Measures presently being taken to enhance our bomber force survival include ground alert, dispersal, and hardening of SAGE centers, selected SAC Hqs, and Hq NORAD. Further, an airborne alert concept is presently being tested.

b. Study and development programs are being continued in an effort to increase the survivability of the bomber force. In addition, an overall study, expected to be completed within six months, will provide more definitive answers to questions concerning the manned bomber survival problem.

c. The bomber survival problem has been complicated by the advent of operational ICBM's.

d. Preliminary costs to provide emergency take-off strips and aircraft protective shelters capable of withstanding 200 PSI overpressures are estimated as follows:

(1) \$103.8 million per B-52 Wing (30 bombers).

(2) \$1.45 billion for the B-52 force of 14 Wings (420 bombers).

e. Hardening was compared to alternate means of survival in terms of systems, their availability, effectiveness, limitations and estimated costs (TAB B).

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Memo for C/S, subj: (U) Vulnerability of SAC Bombers in
Early 1960's

3. The Council agreed that the proposed briefing, with
minor modifications (TAB C), should be presented to Dr. Killian.

3 Incls

TAB A--Questions Sub-
mitted by
Dr. Killian

TAB B--Comparison of
Alternatives

TAB C--Recommended Mods.
to Proposed Briefing

CURTIS E. LEMAY
General, U. S. Air Force
Chairman, Air Force Council

NOTED: FEB 18 1959 1959

SIGNED

THOMAS D. WHITE
Chief of Staff
United States Air Force

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QUESTIONS SUBMITTED BY DR. KILLIAN

1. Does the Air Force believe in hardening SAC bombers?
 - a. If yes, what are the plans?
 - b. If no, why not? What are the alternatives?
2. What are the costs of hardening?
3. How do the costs of hardening compare with the costs of other methods of survival?
4. What are SAC's views of the operational problems which may be encountered in operating from a hardened configuration?

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COMPARISON OF ALTERNATIVES

SYSTEM	AVAILABLE	EFFECTIVENESS	LIMITATIONS	COSTS INITIAL ANNUAL
Increase Dispersal B47 (ZI REFLEX)	60-61	Increase Reqmts Taxes Enemy Timing 120 New Aim pts	Stop Gap Losing Race For Defense	100 M 50 M
Improved Warning BMEWS	62	Up to 15 Min. Warning	Spoofing Jamming Incomplete Coverage	1 B 200 M
MIDAS	62?	12 - 30 Min. Warning High Confidence		150 M 75 M
Airborne Alert	60 - 63	Secure	Ground Control Vulnerable Penetration Problem	1 B

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COMPARISON OF ALTERNATIVES (Cont.)

SYSTEM	AVAIL	EFFECTIVE- NESS	LIMITATIONS	INITIAL	COST ANNUAL
Active Missile Defense	?	?	?	?	?
Increase Force Size B-52 WG	63	Increase Dispersal Larger Force Launched	Losing Race For Defense	713 M	103 M
ICBM Sqdn (ATLAS)	62	Single Missile Dispersal 100 PSI Shltrs		128 M	18/20 M
Bomb Alarm	61	Aids In Decision Process	No Pre-Blast Warning	1 M	1 M
Shelter Bombers B-52	62?	Significant Improvement In Survivability	R/W & Radiation Problem	1/3 Force 700 M	2/3 Force 1.45 B

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RECOMMENDED MODIFICATIONS TO
PRESENTATION ON "VULNERABILITY
OF SAC BOMBERS IN EARLY 1960"

1. Delete the phrase "microscopic dispersal" or explain it in concise and understandable language.
2. In referring to cost figures, emphasis should be placed on the tentative and preliminary nature of these estimates, rather than imply firm cost estimates.
3. It was suggested that Project CENTERLINE be substituted for Project LOW CARD when referring to Study and Development Programs.
4. ~~Emphasize the alternatives to hardening~~ that are available to increase bomber force survivability.
5. Make it clear that the Air Force has long studied the bomber survivability problem and has taken action consistent with established priorities.
6. Delete the term "low accuracies" or further explain it.

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TAB C

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