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AFCGM No. 520635

DEPARTMENT OF THE AIR FORCE  
WASHINGTON

10 February 1958

MEMORANDUM FOR MR. McELROY

SUBJECT: Air Force Ballistic Missile Objectives

During the past several years, the Air Force has been conducting a broad and intensive research and development program in the solid-propellant area, designed to evolve at the appropriate time into ballistic missile weapon systems. These developments have matured to the extent that we can predict, with confidence, the existence of simplified, relatively inexpensive weapons in about the 1962-1963 time period. I feel that now is the time to establish a firm program (MINUTEMAN) which will provide a three-stage solid-propellant ICBM. Combinations of the second and third stages provide attractive weapons in the 200-1500 mile ranges. I am prepared to expend such a program to the maximum extent possible, because I feel that it represents capabilities and savings far beyond our hopes.

Our existing liquid-propellant missile projects must continue, but perhaps not to the force levels we have believed necessary for the mid-1960s, assuming the MINUTEMAN project matures as expected. Meanwhile, we must remain in a position to expand the ATLAS-TITAN force to higher levels, should delays occur in the MINUTEMAN development. I propose to take steps to insure that the initiation of ICBM base construction will continue on such a schedule that our capability to expand the liquid-propellant ICBM force will not be jeopardized.

You have heard a detailed briefing of our ballistic missile capabilities, including a discussion of MINUTEMAN. I would like to list for you the immediate objectives toward which I believe we should advance. In terms of operational squadrons in place at end FY 1962, these objectives are:

ATLAS - 9 to 13, depending on military requirements  
and the state of development of MINUTEMAN

TITAN - 8

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Memo for Mr. McElroy, subj: AF Ballistic Missile Objectives  
(contd)

IRBMs - 16, part of which can be THOR/  
ICBMs if the situation demands

MINUTEMAN - Beginning to phase in during  
(Solid- FY 1963  
propellant  
ICBM/IRBM)

In consideration of the strength of the manned forces of the Strategic Air Command, the above appears to constitute an acceptable missile force level for the 1962 time period. It will contain 170 to 210 ICBMs and 240 IRBMs or THOR ICBMs. Our expectation is that the following rapid buildup of the far less expensive and less demanding MINUTEMAN force will overtake the requirement for additional liquid-propellant missiles of the ATLAS, TITAN, THOR and JUPITER variety, and that the above numbers may constitute buy-outs on some or all of these programs. We are currently studying the total Air Force program to determine specific courses of action and our immediate resource requirements. You will be advised of the outcome of this study at an early date.

Your approval of the objectives outlined above is requested in order that we may commence necessary programming actions. In addition, it is requested that you approve the immediate initiation of the MINUTEMAN program.

SIGNED

Incl:  
Prpsd memo  
for SAFS

JAMES H. DOUGLAS  
Secretary of the Air Force

2  
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114

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10 February 1958

AFCGM No. 580638

MEMORANDUM FOR RECORD

SUBJECT: Secretary of Defense Review of Air Force Ballistic Missile Proposals

1. A meeting was held with the Secretary of Defense 1000-1130 8 February 1958 to consider:

- a. ICBM/IRBM force objectives
- b. Second generation programs

In attendance were:

Secretary of Defense, Secretary of the Air Force, Under Secretary of the Air Force, Assistant Secretary of the Air Force (Research & Development), General LeMay, General Schriever, General McCorkle, Colonel Terhune, Colonel Hall, Colonel Soper, Major Stokes, Mr. Holaday

2. Secretary Douglas covered four points in a five-minute introduction:

- a. ATLAS program has potential of achieving 13 operational squadrons by FY 1962.
- b. TITAN program has potential of achieving 8 operational squadrons by FY 1962.
- c. Exploitation of THOR capabilities offers:

- (1) A comparatively economical ICBM at an early date.
- (2) Attractive contributions to early satellite efforts with useful payloads.

d. An R&D program for a simplified ballistic missile(s) should be initiated immediately.

3. Following a brief introduction by General Schriever, Colonel Hall gave a detailed presentation of the proposed "Minuteman" program, envisioning the immediate initiation of action leading to an inventory of 1,616 low cost simplified ICBM's by end CY 1965. These missiles would be of a three-stage solid motor design capable of delivering

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1.0 MT and 0.5 MT payloads respective distances of 5,500 NM and 6,500 NM. Individual missiles would be located in protective silos so dispersed as to prevent loss of more than one missile in event of attack by a 5.0 MT weapon. The concept embraces a minimum of GSE, no field maintenance, and only one control facility per 50 missiles. All missile components would be designed for long life and self-alignment, thus each operational missile would be in a constant state of readiness. Combinations of the second and third stages would provide attractive low cost TBM's and IRBM's beginning in the CY 1961 period.

4. In considering the foregoing it was

NOTED

a. The current ICBM program is less than that achievable and desirable.

b. Considerations to augment the current ICBM program are under review by the Air Force and recommendations will be submitted to OSD at an early date.

c. Air Force strategic programs must be coordinated with the Navy's submarine (POLARIS, etc.) and aircraft carrier programs. This is an important problem which must be exploited by concerted actions on the part of the services, JCS and WSEG. \*In this respect the SAC force plan is based on immediate reaction to a surprise attack whereas the Navy forces, by inherent physical composition, are not readily or economically adaptable to this type of operation..

AGREED

d. The THOR RTV (Project "Able") effort should proceed.

e. The "MINUTEMAN" constitutes a second generation ballistic system (s) and must be pursued.

f. The Ballistic Missile Scientific Advisory Committee should be briefed in detail on "MINUTEMAN".

g. The ICBM force objectives must be carefully appraised and decisions attained on ATLAS/TITAN within the next 60 days.

\* Air Force Statement

2  
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WD - 58 - 01149  
116

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h. Although solid motors are attractive means of simplifying systems, other propulsion systems utilizing storable and/or high energy liquid propellants must be exploited.



RAY E. SOPER  
Colonel, USAF  
Chief, Ballistic Division  
Office of The Assistant Chief  
of Staff for Guided Missiles

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