

Rand

SANTA MONICA, CA. 90406

D No.: 6744-PR

Assigned to: _____

Prospective RM: YES NO

Project No.: _____

Contract No.: _____

Task Order No.: _____

RAND DOCUMENT

HARD HOMES FOR HEAVY-BOMBER CREWS

R. A. Levine

August 26, 1959

This document was originally not intended for distribution outside of the RAND Corporation; however, given its historical significance, it was published openly in August 2021 after a review by RAND and any controlling U.S. government authority (if required).

For RAND Use Only

DO NOT QUOTE OR CITE IN EXTERNAL RAND PUBLICATIONS OR CORRESPONDENCE

HARD HOMES FOR HEAVY-BOMBER CREWS

One of the problems -- perhaps the chief problem -- of achieving a high level of combined air and ground-alert for SAC's B-52's, is that of the supply of aircrews. As has been pointed out in various documents by the author and Dick Rainey, it is possible to obtain airplanes for ground alert even when the highest possible numbers of bombers are kept on air alert.¹ As has also been pointed out by the author, however, a serious question remains of where to get the aircrews to man the combined alert.² Specifically, given the present number of B-52 aircrews and present SAC factors for flying hours and ground alert hours per crew, there are not even enough aircrews to man the air alert which might be feasible for the aircraft, never mind to man a supplemental ground alert in addition. Various suggestions, such as rapid B-47 phaseout, have been made for increasing the number of aircrews. In addition, some suggestions have been made for increasing the number of alert hours obtainable from existing crews. The purpose of this document is to pursue one of the latter suggestions -- how to get more hours from existing crews in order to man a hardened ground alert.

¹R. A. Levine, R. B. Rainey, The Various Altitudes of SAC Alert: A Handy Pocket Supplement to RM-2303 (U), D-6062, February 24, 1959, SECRET;
R. A. Levine, Some Estimates of SAC Alert Capabilities (U), D-6565,
July 13, 1959, SECRET.

²R.A. Levine, SAC Alert Aircrews at Various Altitudes (U), D-6190,
April 10, 1959, SECRET; and Supplemental Ground Alert -- A Monologue Between
The Author and Two Colonels (U), August 3, 1959, SECRET.

I. THE PROPOSAL

The procedure used for aircrews during the Fairchild Air Force Base air alert test was that each crew would spend two weeks on duty, flying two or three air alert missions, and then have two weeks completely off duty to do what they wanted. This procedure, which amounted to 26 weeks of vacation per man per year found high favor among the crews -- high enough favor in fact, that it might be possible to trade on the good will brought about by the vacation weeks to obtain more duty time during the on-duty weeks. As it stands now, perhaps three days out of the fourteen on duty are used up by air alert and training missions, and another three by the rest and relaxation needed by the crews after flying 24-hour missions. This leaves eight days which could be utilized for ground alert.

Under present SAC ground alert procedures, aircrews are on an alert status for a day at a time. They are, of course, briefed on their missions before they go on alert. Their alert time is spent in special buildings near the alert aircraft where they sleep and carry on all other normal activities.¹ To a bomber aircrew, ground alert means residence in the alert shack, and part of the difficulty in communicating new alert ideas to the Air Force is that Air Force officers familiar with present procedures consider the alert shack a necessary concomitant of ground alert. And it would be pretty difficult to require that aircrews spend the eight on-duty days when they are not flying or recovering from flying in the alert shacks.

¹At least this will be the case when building is complete on all B-52 alert facilities.

8-26-59

-3-

Consider, however, the sheltered ground alert proposed for the 1959-1963 period by RAND's representatives to the Strategic Offensive Force Study. This ground alert is combined with an air alert, and the air alert rather than the other is relied upon to provide the bomber component of the United States' first retaliatory strike. Under the present proposals to SOFS, perhaps some of the sheltered ground alert bombers would receive enough warning to join a strike taking off before the first enemy missiles came in, but this is not the primary purpose of ground alert. The primary requirement levied on the ground alert bombers is simply, "Be!" The bombers are to be there in their holes after the enemy has struck his first blow and are to be available for either bombing or bargaining. The question is, then, how can we ensure that after the first enemy strike we also have some aircrews in being. The crews do not have to be available within a few minutes after first warning, as they do in present soft ground-alert procedures, but they do have to be alive after the enemy strike.

The obvious solution to the problem is that, if we can harden bombers, we can also harden bomber-crews. Because they do not have to be available right after the enemy strike, we do not have to harden them in alert shacks in the immediate vicinity of the hardened aircraft. Rather, it might well be possible to harden the places where aircrews would ordinarily be when in a general two-week duty status but not actually flying. If we guess right as to where the crew members will be located a large enough proportion of the time, we can have a large enough proportion of the crews surviving a no-warning attack to man the sheltered B-52's also surviving this attack.