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27 AUG 1959

Impact of F-108 Cancellation, EX 61-F-1

DOWNGRADED AT 12 YEAR INTERVALS; HOT AUT MATICALLY DEGLATRIFIED

Chairman, Weapons Board

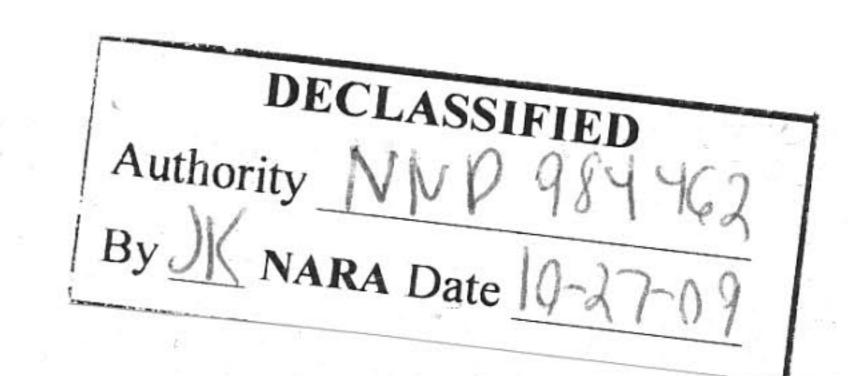
1. Without the F-108 Long Range Interceptor we would be forced to extend the life of the F-101B and F-106 Weapon Systems. These two manned systems and BOMARC "P" would comprise our air defense posture against the air-breathing threat. Even with the complementary manned and unmanned systems we find some serious limitations in our defense structure in the 1963-70 time period without the F-108.

- 2. The most difficult problems facing our air defense system, in this time period, are the low altitude threat and the 500 NM air-to-surface missile available in 1963. The limitations of the individual systems are shown below:
- a. As we evaluate the F-101B against the projected threat for the 1965-70 time period, we find the F-101B lacking in both speed and radius. The detection range of the MD-13 fire control system is adequate when operating under control of ground radar, but lacks the capability to effectively operate outside solid radar cover. Due to ground clutter, this system has no capability against low altitude targets except manual launching of the GAR-2 infrared missile under VFR conditions. Due to the range of the projected air-to-surface missile threat and the performance of the F-101B only a limited capability is available against the 1963 air-to-surface missile.
- b. The F-106 basically has the same limitations but has slightly better performance than the F-101B. It does possess AMTI; however, this gives it only a limited capability at low altitude.
- c. For the most effective operation of BOMARC "B", a sophisticated ground environment is required. It has the capability to operate without ground control in a pattern patrol mode; however, its limited radar search capability makes it difficult to locate targets without precise control. In order to utilize its range fully, those units deployed on our coasts required AEM&C to extend the ground radar coverage. As in all missiles it lacks the human intelligence to positively identify targets. It has no capability against the long range air-to-surface missile.
- 3. In summarizing the overall defense limitations against the air-breathing threat without the F-108 we find there is no method of evaluating a raid in the remote area. The DEW Line can tell us when a raid passes, but it cannot say whether it is composed of decoys, bombers alone, or a combination of both. We will be in the dark about force size, composition and tactics until entry into solid radar cover. This evaluation is essential in order to

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provide our own strike forces with sufficient data so as to allow launch of the retaliatory effort, to say nothing of its requirement for alert and deployment of our defense forces. There is no method of obtaining continuous data on a raid after DEW penetration and prior to contiguous cover entry. There is no way by which we can remote the air battle beyond solid radar cover. We need some method of putting teeth in the DEW Line to prevent "spoofing." Our pre-F-108 interceptors are limited in their capability to deploy against a raid from bases distant from the raid path. Since we must intercept generally after dash has begun and decoys and lir-to-surface missiles have been launched, our overall kill capability is degraded considerably from what could be obtained if we could increase our depth of defense. Without the F-108, we have a very limited capability against the air-breathing threat and no capability against certain elements of the threat.

