



DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20350

10 December 1977

threat of Backfire

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MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subj: DON Fighter/Light Attack Options - INFORMATION MEMORANDUM

Last week Graham sent you preliminary costs for a DON fighter/light attack alternative which we had discussed earlier. This option takes account of fiscal constraints that we now see ourselves facing in the FYDP years, and over the longer term as well, in aviation, shipbuilding, and other Navy/Marine Corps programs. In his interim report, he noted that life cycle costs for the DON Option had been developed, and that backup detail was being coordinated with PA&E. This coordination has continued. I received the PA&E comments on the options late yesterday.

It is clear that PA&E differs substantially from our views on several major aspects of the DON fighter/light attack program:

- Mission effectiveness of F-18 vs. F-14 in the Navy fighter force
- The relationship of the F-18 to the potential requirement for re-engining the F-14
- The relative merits of A-18 and A-7E for the Navy light attack force
- The desirability of AV-8B and a VSTOL Marine light attack force
- The prospect of an F-4 Marine fighter force extended into the early 90's, and
- Relative affordability of the October FYDP program and the DON Option

During the POM review dialogue, recent low fighter/attack aircraft procurement rates were a matter of OSD and Navy concern. This deficiency is also emphasized in the draft Secretary of Defense Annual Report. Our proposal buys 63 more fighter/light attack aircraft that the FYDP (APDM) whereas Russ's "get well" modification buys an extra 72 in the same period -- but breaks the bank in the process. But military aircraft procurement is not primarily a matter of mercantile inventory management. Inventories must, of course, be sustained, but the dominant consideration is best use of limited resources to buy the mission capability required to meet the projected threat according to rational priorities. The DON fighter/light attack option is carefully structured to this end.

Navy Fighter Force

The major maritime air threat of the 1980's is the BACKFIRE, and other ASM platforms, with the capability of reaching most vital SLOC's in the northern hemisphere and launching concentrated attacks from standoff ranges

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~~SUBJ TO G.D.S. OF E.O. 11652~~
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~~DECLAS ON 31 DEC 1985~~

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up to 300 nm. The BACKFIRE's range extends from the Soviet mainland to the environs of Pearl Harbor in the Pacific and the Azores in the Atlantic. In either a Case I or a Case 4/5 scenario, the Navy must be capable of defeating, or deterring, this threat. It is clear that only the F-14 offers such a capability. The F-18 does not. The F-18 is not, as is often stated, a lower cost complement to the F-14. It is, rather, a lower capability substitute.

- The 18 F-14 squadrons and 6 F-18 squadrons of the FYDP (APDM) force cannot reasonably be evenly spread among 12 carriers.
- Admiral Holloway, Graham, and I are assuredly among those who 'can argue that 10 F-14's are as good or better than 12 F-18's," and with little sensitivity to scenario. It is directly due to this firmly held conviction that 10-UE F-14 squadrons were spread to 11 carrier wings in our POM and that our present modified option postulates an all-F-14 force at reduced UE.
- The only marginal advantage claimed for the F-18 is its greater dogfight agility. In addition to being irrelevant to the most serious threat, this claimed advantage is degraded by the decreasing likelihood of future dogfight encounters because of the introduction of much-improved all-aspect air-to-air missiles. With a re-engined F-14, even this limited advantage alleged for the more agile F-18 is most likely reversed.

Re-engining

With respect to re-engining, we do not agree that "In the absence of the F-18 ... the chances of re-engining the F-14 would be very high indeed [but] with the F-18 ... such a move could be avoided." It is apparent to me that the potential F-14 re-engine requirement is, analytically, almost totally independent of the F-18. First, the two aircraft would be collocated only in rare instances, and thus would have almost no opportunity to interact. Second, even if collocated, there is no way in which the F-18 could offset any perceived deficiency in the other three-fourths of the Navy fighter force. Nor does the advertised swing-fighter capability for the A-18 contribute much to consideration of F-14 re-engining. The rigor and perishability of single mission pilot training are such that primary dual mission capability is difficult to maintain. We would tend to agree that A-7 re-engining is considerably more likely in the absence of A-18.

Navy Light Attack Force

The principal advantage identified for the A-18, relative to the A-7E, in the Navy light attack force is its greater expected combat survivability due to twin engines and more maneuverability. This margin would be reduced by a re-engined A-7E. Independent of re-engining, however, the A-18 loses much speed and agility as long as it is carrying a payload. Only in post-attack retirement is its full benefit realized, and this benefit is offered

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at a significant cost in range/payload (a characteristic emphasized by PA&E in evaluating the AV-8B study). Any reduction in range capability can increase task force vulnerability -- requiring carriers to operate closer to threat areas. With the number of tankers available in a carrier air wing, the Navy has the capability to extend fighter escort range by in-flight refueling; it cannot refuel both fighters and a substantial attack force.

Marine Light Attack Force

We, too, respect and are impressed by the Commandant's strong conviction in regard to the AV-8B. It is of central importance to our recommendation that the AV-8B is the right choice for the Marine light attack force. With regard to the AV-8B study and the PA&E review, a few observations: our study acknowledged that overall comparative AV-8B/A-18 effectiveness is heavily assumption/application dependent. The primary considerations which led to our conclusions were that the Marine mission mandates a maximum of scenario-independent flexibility, a characteristic to which VSTOL is well matched; that Marine light attack is predominately (85 percent) a close air support force; and that the AV-8B offers exceptionally responsive CAS ideally suited to the proven Marine concept of air-ground force integration. We concluded that, given the purpose for which the Marine light attack force is intended and the tactics and methods of applications which the Marines, based on their plans and experience, expect to use, the Commandant's conviction is justified. The AV-8B is definitely preferable for the Marine light attack role.

The PA&E rebuttal apparently rejected these considerations.

- The AV-8B force and capability were reduced by a fourth through the technique of cost discounting.
- Target urgency and value decay times supported by the Joint Staff were challenged.
- Perfect mission convertability between fighter and attack for the A-18 was assumed. This doesn't work, as noted earlier. The Air Force tried it, but soon gave it up, in Vietnam.
- The vulnerability of major conventional bases was largely discounted, but it remains a matter of grave concern in Europe.
- Assumed worldwide base availability ignored the facts that the Marines are out of the catapult business; that bases which, as is, will actually support A-18 operations are a small fraction of those which exist; and that the bases capable of A-18 support must be in our hands, undamaged or repaired, and not filled with other forces in order to be relevant. A major advantage of VSTOL is that it eliminates these kinds of problems.
- The fact that many of our assumptions are being proved by British HARRIERS in Europe today.

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Marine Fighter Force

PA&E takes its strongest exception to the Marine F-4 fighter force in our Option. I readily admit that we don't like it much either. But within the context of continuing funding pressures, the near-term savings offered by our Option, and provision of all-F-14 Navy fighters and AV-8B Marine light attack, it is an acceptable tradeoff.

- SLEP/CILOP funds identified are sufficient to keep the F-4's operable and maintain or improve their system capability.
- The mission requirement of the Marine fighter force tends more toward maintenance, rather than establishment, of air superiority.
- Forthcoming AIM-9, AIM-7, AMRAAM missile improvements shift capability emphasis from F-4/F-18 platforms to the weapons.
- While the Marines' first preference would be an F-18/AV-8B force, they would clearly prefer an F-4/AV-8B force to PA&E's FYDP (APDM) F-18/A-18 mix, and, as an essential sub-set of the entire DON option, I fully agree.

Affordability

But, overall, the greatest weakness of the APDM/FYDP program is in the area of affordability. PA&E is greatly concerned with the long term affordability of our Option. An improbable strawman, in which extremely high near-term costs are driven by an all-F-14 Marine fighter force, is built to demonstrate it. We, on the other hand, are extremely concerned about the near-term non-affordability of the FYDP alternative which includes the F/A-18. I would call your attention to the number, scope, variety, and magnitude of the capabilities represented by the items between the decremented and basic budget levels in the current review. There appears to be little doubt that the FYDP program costs more than we are going to get as we proceed to implement it.

- If F-14 procurement is reduced to 24 as listed in two or three bands, how will we achieve the 18-squadron force?
- Submarines, cruisers, weapons, and flying hours are already in jeopardy; our ship construction program, which was at 31 ships only a few months ago, now stands at 16.
- How well will reduced weapons and flying hours support F/A-18 mission flexibility?

The point is, our Option saves almost \$2B in the FYDP years. PA&E does not challenge that, the strawman notwithstanding.

Assuredly, \$2B will not entirely solve our fiscal difficulties, but it certainly helps. Add a re-engine and we still save money. And, if dollar problems continue, we will move toward a reduced UE to spread our fiscally constrained capability most efficiently.

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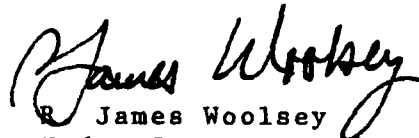
Summary

In summary, Russ recommends against our option because:

- he doesn't think we can do it within fiscal guidance.
- he prefers the A-18 to the AV-8B.
- he is not persuaded on VSTOL.

Setting pro/anti-VSTOL persuasion aside, our position backs down to a firm conviction that we can't afford the APDM program within fiscal guidance now. Russ believes our program is betting on the come, both in keeping the F-4 alive, and in VSTOL. We believe that Russ is betting on the come in projecting F-18 production rates of 180-200 per year. We believe that such a program is unlikely and will eventually entail the very reliance in aging F-4's which Russ believes unrealistic. In essence, it is clear to me that both of these programs involve relying upon F-4's longer than we would desire. The basic difference between them is that the FYDP/APDM requires immediate massive cuts elsewhere (Russ's termination of the AV-8B program notwithstanding) whereas the DON options help considerably in easing near-term funding pressure.

I reiterate, for Graham, and the Department, although the F/A-18 provides some capabilities that we would like to have, in light of the fiscal constraints we surely face, it is far preferable to terminate it than to suffer the disproportionate loss in other aviation and non-aviation programs which otherwise seem inevitable.



James Woolsey
Under Secretary of the Navy

Office of the Secretary of Defense
Chief, RDD, ESD, WHS

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