



ACQUISITION,
TECHNOLOGY
AND LOGISTICS

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

05 DEC 2002

MEMORANDUM FOR SECRETARY OF THE NAVY
ATTN: ACQUISITION EXECUTIVE

SUBJECT: Maritime Prepositioning Force (Future) Milestone A Acquisition
Decision Memorandum

Based upon the recommendation of the Overarching Integrating Product Team (OIPT), I approve entry into Concept and Technology Development of the Maritime Prepositioning Force (Future) (MPF(F)) concept.

The Navy shall submit a Test and Evaluation Strategy within 180 days after the date of this memorandum. Additionally, the Navy will provide the OIPT leader with a list of all research and development efforts relevant to the MPF(F) program by January 24, 2003.

I approve the MPF(F) Analysis of Alternatives (AoA) guidance as submitted by the Director, Program Analysis and Evaluation. I will issue the AoA guidance via separate memorandum.

The Navy will brief the OIPT within 6 months after completion of the AoA on the program plan, schedule (including milestone reviews), and funding, in light of the results of the AoA. I also direct that at the end of the Concept Exploration phase, the Navy identify program specific exit criteria for the Component Advanced Development phase leading to Milestone B.

E. C. Aldridge, Jr.

cc:
DAB Members





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MEMORANDUM FOR SECRETARY OF THE NAVY

SUBJECT: Guidance for Maritime Prepositioning Force – Future (MPF(F)) Analysis of Alternatives (AoA)

The United States' capacity to project power rapidly in response to the full spectrum of crises is a linchpin of our defense strategy. The Department of Defense is responsible for providing sufficient mobility to project and sustain U.S. forces in distant anti-access or area-denial environments, as required by the FY 2004-2009 Defense Planning Guidance (DPG) and the 2001 Quadrennial Defense Review (QDR). The Maritime Prepositioning Force – Future provides a potential means of meeting that objective.

The AoA for the MPF(F) concept should consider a wide range of alternatives. The analysis should compare the strengths and weaknesses of the alternatives, particularly with respect to their responsiveness to the new defense strategy and to the Secretary's transformation initiative. The following guidance is provided to assist you in conducting the AoA for the Milestone B review of the MPF(F).

A. Purpose

(1) The AoA should use the MPF(F) Mission Need Statement (MNS) as the beginning point for evaluating alternatives, and should identify mission deficiencies and establish measures of effectiveness. Analyses should be performed for each primary mission to which the MPF(F) is expected to contribute. Each analysis should evaluate how well the postulated MPF accomplishes its assigned missions in the context of the Defense Planning Guidance and its associated Illustrative Planning Scenarios (IPS). The IPS will serve as the baseline for the analysis; other CNO-approved scenarios, as well as excursions to the baseline, may also be considered.

(2) A capabilities-based approach, focusing on how an adversary might fight in the future, should be employed in conducting the AoA. Adversary capabilities are likely to include terrorism, cyberwarfare, advanced missile systems, advanced torpedoes, mines, aircraft, weapons of mass destruction, and naval Special Forces.

(3) The AoA should define alternative MPF(F) sea-basing capabilities and critical parameters (such as speed, range, draft, and cargo payload).

(4) The analysis should quantify the advantages and disadvantages of each alternative and describe the scenario factors and system characteristics that drive the results.



(5) The study should assess the potential contributions of each MPF(F) alternative to meeting mission needs and identify the associated costs.

(6) The report should include a discussion of the assumptions underlying the analysis.

B. Range of Alternatives

(1) The AoA should consider a broad range of platform alternatives. In structuring the alternatives, assume the MPF(F) will comprise a family of systems rather than a collection of ships of a single type. The missions of the MPF(F) will focus on force closure and sustainment of a Marine Expeditionary Brigade (MEB). MPF(F) systems should be designed to achieve applicable capabilities across the warfighting functions of command and control, intelligence, fires, maneuver, aviation, logistics, and force protection. The AoA should avoid placing arbitrary restrictions on design characteristics and should incorporate emerging technologies as appropriate. At a minimum, the analysis should address the following alternatives:

- (a) *Alternative 1.* Replace the current MPS and Aviation Logistics Support Ships (T-AVB) in kind.
- (b) *Alternative 2.* Modify current MPS and T-AVB ships to perform MPF(F) missions. The modifications should entail only internal and external equipment or configuration changes.
- (c) *Alternative 3.* Replace existing MPS ships with newly designed platforms configured to (1) support phased at-sea arrival and assembly; (2) receive, store, maintain, manage, and deploy equipment and supplies to sustain logistics support of naval operations; (3) sea base, operate, and maintain aircraft (including combinations of rotary-wing, STOVL, UAV, and/or UCAV systems); (4) interface with surface assault and distribution craft, including AAV, LCAC, LCU(R), and high-speed vessels; and (5) provide in-theater, at-sea, reconstitution, and redeployment support.

(2) For Alternatives 1-3 and any other alternatives, examine a range of sea-based logistic support capabilities that provide throughput for (a) the organic MPF(F) MEB; (b) the organic MEB and associated expeditionary assault shipping, including expeditionary strike groups (ESGs); and (c) the organic MEB and associated expeditionary assault shipping, including an expeditionary strike force (ESF) of one or more carrier strike groups (CSGs) and ESGs operating in the vicinity.

(3) For Alternative 3 and any other alternatives that include the sea basing of aircraft, also examine the cost, capability, and risk trade-offs of basing aircraft (a) on the MPF(F); (b) on ESG ships; (c) on a supporting aircraft carrier; or (d) on some combination thereof.

(4) For alternatives beyond the current baseline, examine the feasibility of incorporating as modules, or as variants, additional mission packages that provide the following capabilities: Level 3 afloat medical care; joint and coalition command and control; mine countermeasure support; afloat forward staging for special operations forces; and support for expeditionary forces (aviation combat, ground combat, and combat service support elements).

C. Measures of Effectiveness

(1) Each alternative will be assessed for consistency with the new defense strategy (including the current DPG and transformation guidelines) and will be evaluated in terms of its ability to support the operational goal of projecting and sustaining U.S. forces in distant anti-access or area-denial environments.

(2) The AoA will use measures of effectiveness (MOEs) to compare operational capabilities and suitability (e.g., susceptibility, vulnerability, reliability, maintainability, availability, and mission deficiencies) of the alternatives across the warfare areas identified in the MNS.

(3) At a minimum, the MOEs shall include: (a) the time (in days) to deliver forces to establish a combat-ready MEB in selected DPG IPS and CNO-approved scenarios (include in this metric the time, in days/hours, needed to assemble the forces upon arrival); (b) the time (in hours) to off-load pier-side, underway, and at anchor; (c) the days of sustainment carried, by class; (d) the ability to resupply both to and from the MPF(F) ships, including rate (in unit loads or tons/day) and limiting sea-state; and (e) the ability of the ships to support intermediate maintenance of aircraft and ground equipment.

(4) The AoA will compare the space, weight, and power requirements of the alternatives, and describe how they influence ship design. The comparisons should include a discussion of the ability of the MPF(F) squadron under each alternative to provide living spaces for MEB personnel, as required to support the phased arrival, assembly, and subsequent sea-based operations of the MEB. Crew size and the mix of civilian/military personnel also should be addressed in the comparisons.

(5) Susceptibility (including radar cross section) and vulnerability assessments should be conducted for each alternative, consistent with projections on how an adversary might fight. The AoA should evaluate the ability of the civilian-crewed MPF(F) to defend itself, describe the design features incorporated to reduce ship equipment losses and crew injuries/casualties, and assess self-protection and damage control capabilities.

D. Cost Analysis

(1) The current MPF program will serve as the baseline for cost and effectiveness comparisons.

(2) Include all additional costs for aircraft, prepositioned stocks, lighterage, onboard Intermediate Maintenance Activities (IMAs), amphibious vehicles, or other major craft if they are beyond those currently programmed or planned and are required to support

the MPF(F). The AoA report should compare the costs and capabilities of the alternatives with and without the additional equipment.

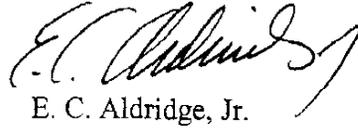
(3) Present value discounting—computed in accordance with applicable Navy, OSD, and OMB guidance—should be used in comparing the costs of the alternatives.

(4) Analyses of life-cycle costs should cover the period 2008-2048 in order to capture estimates of research and development, acquisition, manpower, and 40-year operating and support costs (including decommissioning and disposal costs) as well as any incremental costs associated with reconstituting and/or maintaining the shipbuilding industrial base if necessary. The life-cycle cost estimates should be coordinated with the OSD Cost Analysis Improvement Group (CAIG).

E. Deliverable

The AoA should be a written report presenting the findings of the analysis.

I look forward to the insights you will provide as a result of this study. Toward that end, my staff stands ready to advise you as you commence this ambitious analysis.



E. C. Aldridge, Jr.