THE ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, DEVELOPMENT AND ACQUISITION)
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MEMORANDUM FOR UNDER SECRETARY OF DEFENSE (ACQUISITION AND TECHNOLOGY)

Subj: Reliability, Availability and Maintainability (RAM) Policy

Ref: (a) USD(AT&L) Memo dated 21 July 2008, Same Subject
(b) SECNAVNOTE 5000, DoN Requirements and Acquisition Improvements
(c) Sample Reliability Language for DoD Acquisition Contracts Based on GEIA-STD-0009
(d) DoD 4245.7-M Templates
(e) DoD Guide For Achieving Reliability, Availability and Maintainability, dated 3 Aug 2005

The Department of the Navy recognizes opportunities to improve RAM and is reinvigorating our processes to achieve it. The focus of this effort is to exercise a disciplined approach to ensuring definite and quantifiable RAM requirements are built into system design and that these requirements are accurately assessed at each stage of the acquisition process. To achieve the required discipline, we are reinvigorating existing RAM-focused procedures and processes, and implementing key reforms. Additional policy will be created, as appropriate, to support ongoing reforms. Reference (a) identified four specific RAM practices to be addressed:

(1) Improving Collaboration Between the Requirements and Acquisition Communities: The recently implemented Two Pass/Six Gate process, identified in reference (b), provides a series of senior level acquisition and user stakeholder reviews to ensure agreed to RAM requirements are implemented and funded prior to contract award.

(2) Building RAM into Acquisition Plans and the Contracts that Support Them: Contracts will include the requirement for suppliers to implement effective RAM programs and provide updated analyses toward achievement of those requirements as part of the systems engineering review process. RAM requirements will be fully funded prior to contract release. Reference (c) information will be utilized when developing tailored reliability program requirements for contracts and their management.

(3) Evaluating the Maturation of RAM Through Each Phase of the Acquisition Life Cycle: Programs will ensure design and verification tests for RAM are planned for and incorporated into contracts as applicable. This includes the appropriate RAM design activities such as development of a Design Reference Mission Profile, electrical/mechanical/ thermal stress analyses, worst case circuit/tolerance analyses, parts

derating requirements, failure modes, effects, and criticality analyses, built-in-test/testability design, and RAM modeling & analysis. During Systems Development and Demonstration (SD&D), programs will address the use of in-process test and evaluation, such as highly accelerated life testing and other stress testing, and requirements for reliability growth development testing. These requirements also apply to systems that rely on the use of non-developmental items (NDI) or commercial off-the-shelf (COTS) items to field capabilities. Additional best practices are included in references (d) and (e). While not all analyses and tests will be applicable across the board, all Acquisition Category (ACAT) programs will be required to provide rationale for not including RAM design analyses and verification as part of their continuing business case analyses.

Assessment and verification of RAM requirements and progress toward RAM design maturity during the design phases and subsequent acquisition life cycle phase is included in the Two Pass/Six Gate Process for ACAT I/II programs; the Systems Engineering Technical Reviews; Independent Logistics Assessments, and independent risk assessments and program reviews. The assessments include comparison of the RAM requirement with the latest estimate as the design progresses (e.g., analyses and predictions, SD&D test results, Technical Evaluation/Initial Operational Test and Evaluation results, and fleet performance results).

(4) Evaluating Contract Incentives for Advancing RAM: Prior to the issuance of reference (a), the Secretary of the Navy formed an executive-level task force to develop recommendations for providing greater incentives for industry to improve RAM. The findings of this task force will be reported back in mid-September. A summary of the recommendations will be provided under separate cover.

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