MEMORANDUM FOR COMMANDER, U.S. ARMY MATÉRIEL COMMAND,
5001 EISENHOWER AVENUE, ALEXANDRIA, VA
22333-0001
PROGRAM EXECUTIVE OFFICERS
PROGRAM MANAGERS

SUBJECT: Policy on Incorporating a Performance-Based Approach to
Reliability in Request for Proposals (RFPs)

Sound reliability requirements are important components of an RFP. This
memorandum provides policy on reliability requirements in performance-based
RFPs.

Reliability requirements should be included in RFPs by specifying:
(1) quantified reliability requirements and allowable uncertainties, (2) failure
definitions and thresholds, (3) life-cycle usage conditions. Requirements for
reliability predictions, reliability M&S, and reliability testing can be included to
support the assessment of risk in achieving quantitative reliability requirements
and to support the Program Manager’s plan for risk management. RFPs should
solicit adequate information for evaluating the source data, models,
reasonableness of modeling assumptions, methods, results, risks and
uncertainties. Requirements to use particular models or statistical test plans
should not be specified in RFPs.

Failure definitions and life-cycle usage conditions are necessary to fully
define the quantitative reliability requirements. The extent to which failures and
usage conditions are defined should be determined on an acquisition-specific
basis.

The best RFPs will directly specify performance-based reliability
requirements and avoid citing any specification, standard or handbook.
Language specifying “how to” design, manufacture or test for reliability is not to
appear in RFPs. Use of any reliability specification, standard or handbook
(military or not) in an RFP, even for guidance, requires a waiver using the
existing waiver process for military specifications and standards. In particular,
MIL-HDBK-217, Reliability Prediction of Electronic Equipment, is not to appear in
an RFP as it has been shown to be unreliable and its use can lead to erroneous
and misleading reliability predictions.

The Army Material Systems Analysis Activity will provide guidance to the
field by April 15, 1996. Please work with AMSAA, the Army Standardization
Improvement Executive’s Executive Agent for Reliability and Maintainability
Standardization Improvement, on the development and refinement of guidance
to implement this policy.

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