DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. TITLE	2. IDENTIFICATION NUMBER
RELIABILITY PREDICTION AND DOCUMENTATION OF SUPPORTING DATA	DI-RELI-81497

3. DESCRIPTION/PURPOSE

3.1 This report documents contractor quantitative predictions of end item Reliability. The Reliability Prediction Report is intended as support for feasibility evaluations, comparison of alternative configurations, identification of potential problems, logistics support planning, life cycle cost studies, determination of data deficiencies, tradeoff decisions, allocation (apportionment) or performance requirements, and criteria for reliability growth or demonstration testing.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
951030	N/AIR-4.1.6	X	

7. APPLICATION/INTERRELATIONSHIP

7.1 This Data Item Description contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.
7.2 This DID is applicable during the Conceptual, DEM/VAL, and E&MD phases.
7.3 This DID supersedes DID DI-R-7095.
7.4 This DID is not applicable to the production phase unless warranted by significant design changes associated with improvement programs.
7.5 Defense Technical Information Center (DTIC), Cameron Station, Attn: DTIC-FDAC, Alexandria, VA 22304-6145.

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
		N7167

10. PREPARATION INSTRUCTIONS

10.1 Content. The report shall contain the documented results of the reliability prediction. Applicable failure rates, failure distributions, failure rate adjustment factors, and reliability variables used in the calculation of each subdivision of the end item shall be shown. The report shall identify the source(s) and evaluate the validity of data used in the reliability prediction.
10.1.1 Item description. Each end item shall have a description of the purpose and function provided.
10.1.2 Reliability prediction The reliability prediction of each subdivision of the hardware breakdown structure for each mission, mode of operation, and periods of non-operation and storage from an item's final factory acceptance through its terminal expenditure or removal from inventory shall be included in the report.
10.1.2.1 The type and method of each reliability prediction shall be identified in the report.
10.1.2.2 Operating and environmental stress factors and ratios used in determining part failure rates shall be cited in the report and individually identified as Estimated (E), Calculated (C), or Measured (M).
10.1.2.3 Failure rate data sources used in the reliability predictions shall be identified and justified.

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11. DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

10.1.3 Data identification. Reliability prediction reports shall document or adequately cross-reference the following data used in performing predictions:

a. Parts description
b. Failure rate data and sources
c. Failure distributions
d. Assumptions
e. Constraints
f. Item Definition
g. Service use profile
h. Reliability block diagrams
i. Reliability mathematical models
j. Environmental data
k. Stress data

10.1.4 Conclusions and recommendations. Reliability prediction reports shall include contractor conclusions and recommendations based upon the prediction effort. They shall be consistent with the phase of item development and the revision status of the report. The contractor shall provide interpretation and comments relative to the prediction and courses of action to resolve deficiencies or discrepancies identified from the prediction effort. Consideration shall be given to Contractor Furnished Equipment (CFE) and Government Furnished Equipment (GFE) integration problems, tradeoffs, risks associated with the prediction, reliability interaction which affect planning, qualitative or quantitative aspects which affect the item development, actions taken or proposed related to the prediction, or other factors related to the prediction process and item reliability.

10.2 Format. Contractor format is acceptable.