NOTICE OF CHANGE

MIL-STD-973 INTERIM NOTICE 3 13 January 1995

MILITARY STANDARD CONFIGURATION MANAGEMENT

TO ALL HOLDERS OF MIL-STD-973:

- This Notice of Change is being issued to facilitate the transition to the electronic data environment for the storage, transfer and maintenance of information. It is also an interim measure pending completion of a new national consensus non-Government standard (NGS) on Configuration Management, a DoD Practices Appendix to that NGS, plus simultaneous completion of an Interface Standard containing the DoD's information requirements only.
- a. To facilitate electronic commerce, all requirements to use DD Forms for the submittal of data have been deleted. The replacement requirement is Contractor format.
- b. All documents cited as mandatory reference documents have been deleted from the standard in support of the recommendation on "Excessive Referencing" contained in the Process Action Team on Military Specifications and Standards' Blueprint for Change Report. Some of these documents are now cited in Section 6 as useful sources of information for specific topic areas, while other information has been imported into the text.
- 2. THE FOLLOWING PAGES OF MIL-STD-973 HAVE BEEN REVISED AND SUPERSEDE THE PAGES LISTED:

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- Holders of MIL-STD-973 will verify that page changes indicated above have been entered. This notice will be retained as a check sheet. This issuance, together with the appended pages, is a separate publication. Each notice is to be retained by stocking points until the Military Standard is completely revised or canceled.
- In this Notice, pound signs (#) are used in the left margin to denote changes (additions, modifications, corrections, deletions) from the basic standard. This was done as a convenience only, and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notation and relationship to the basic standard.

Custodians:

Preparing activity:

Army - AR OSD - DO

Navy - AS

Air Force - 10 (Project: CMAN-0038)

Other Government Activities - NS

Review activities:

Army - AM, AL, EA, AV, CR, ER, MI, AT, ME, GL, TM, SM, MD, SC, IE, LM, ET, AC, PT, HD, MR, TE, CE

Navy - EC, MC, NM, OS, SH, CG, YD1

Air Force - 10, 13, 17

DLA - DH

Other Government Activities: DC

software items, they are shown as requirements for computer software configuration items (CSCIs) or hardware configuration items (HWCIs), as applicable.

6. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Chief, Plans and Policy Division, CALS Evaluation and Integration Office, 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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MIL-STD-973

1. SCOPE

- 1.1 <u>Scope</u>. This standard defines configuration management requirements which are to be selectively applied, as required, throughout the life cycle of any configuration item (CI):
 - a. Developed wholly or partially with Government funds, including non-developmental items when the development of technical data is required to support off-the-shelf equipment or software, or
 - b. Designated for configuration management for reason of integration, logistics support, or interface control.
- 1.2 <u>Applicability</u>. This standard applies to Department of Defense activities and contractors who are tasked with the application of configuration management.
- 1.3 <u>Tailoring of requirements</u>. This standard is applicable only to the extent specified in the tasking directive or contract Statement of Work (SOW). Contracts invoking this standard will specifically identify the appropriate applicable paragraphs and Appendices, or portions thereof, in the tasking directive or contract SOW. (See 6.2 for specific tailoring guidance.) The selection of necessary configuration management requirements from this standard to be applied to a specific program will be tailored to suit the life-cycle phase, complexity, size, intended use (including joint and combined interoperability), mission criticality, and logistics support of the CIs.

2. APPLICABLE DOCUMENTS

This section does not apply to this standard since there are no documents referenced in Sections 3, 4, or 5. Section 6 contains several useful references.

DEFINITIONS

3.1	Acronyms used	in this standard.	The acronyms used in this
	are defined as		

- a. ABL Allocated Baseline
- b. ACD Allocated Configuration Documentation
- c. ACSN Advance Change Study Notice
- d. AIS Automated Information System
- e. AMSDL Acquisition Management Systems and Data Requirements Control List
- f. CAGE Commercial and Government Entity
- g. CAO Contract Administration Office
- h. CCB Configuration Control Board
- i. CDR Critical Design Review
- j. CDRL Contract Data Requirements List
- k. CI Configuration Item
- 1. CM Configuration Management
- m. CSA ·- Configuration Status Accounting
- n. not used

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- o. CSAR Configuration Status Accounting Report
- p. CSCI Computer Software Configuration Item
- g. DID Data Item Description
- r. DLA Defense Logistics Agency
- s. DOD Department of Defense
- t. DODAAC- Department of Defense Activity Address Code
- u. DODISS- Department of Defense Index of Specifications and Standards
- v. DUI Data Use Identifier

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w. E	ECP	-	Engineering	Change	Proposal
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- x. EMD Engineering and Manufacturing Development
- y. FBL Functional Baseline
- z. FCA Functional Configuration Audit
- aa. FCD Functional Configuration Documentation
- ab. GFD Government Furnished Data
- ac. GFE Government Furnished Equipment
- ad. HWCI Hardware Configuration Item
- ae. ICD Interface Control Drawing
- af ICWG Interface Control Working Group
- ag. IDD Interface Design Document
- ah. ILS Integrated Logistics Support
- ai. IRS Interface Requirements Specification
- aj. LSA Logistics Support Analysis
- ak. MRB Material Review Board
- al. MTS .- Mobile Training Sets
- am. NDI Non-Developmental Item
- an. NOR Notice of Revision
- ao. NSN National Stock Number
- ap. PBL Product Baseline
- aq. PCA Physical Configuration Audit
- ar. PCD Product Configuration Documentation
- as. PDI Privately Developed Item
- at. PDR Preliminary Design Review
- au. PPSL Program Parts Selection List

av. RFD - Request For Deviation

aw. RFW - Request For Waiver

ax. SPS - Software Product Specification

ay. SDL - Software Development Library

az. SCN - Specification Change Notice

ba. SOW - Statement of Work

bb. TCTO - Time Compliance Technical Order

bc. TRR - Test Readiness Review

bd. VDD - Version Description Document

be. VE - Value Engineering

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bf. VECP - Value Engineering Change Proposal

bg. WBS - Work Breakdown Structure

- 3.2 Advance Change Study Notice (ACSN). A document which may be used, instead of a preliminary Engineering Change Proposal, to identify an idea or problem in order to obtain authorization to submit a formal routine Engineering Change Proposal.
- 3.3 <u>Allocated Baseline (ABL)</u>. The approved allocated configuration documentation.
- 3.4 Allocated Configuration Documentation (ACD). The documentation describing a CI's functional, performance, interoperability, and interface requirements that are allocated from those of a system or higher level configuration item; interface requirements with interfacing configuration items; and the verifications required to confirm the achievement of those specified requirements.
- 3.5 Approval/contractual implementation. The acceptance by the Government of a document as complete and suitable for its intended use. Approval/contractual implementation of configuration documentation means that the approved documentation is subject to the Government's configuration control procedures.
- 3.6 <u>Block change concept</u>. For hardware configuration items, an engineering change implementation concept that

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designates a number (i.e., a block) of consecutive productionunits the configuration item to have an identical configuration on delivery and in operation. (Using this concept, the production run is divided into "blocks" of units. The production line incorporation point for a proposed ECP is delayed to coincide with the first unit of the next block, or retrofit is required at least for all already-delivered units of the current block.) For computer software configuration items, once the product baseline has been established, the concept requires the accumulation and the simultaneous implementation of a number of routine software changes to minimize the number of interim versions and related documentation.

- 3.7 <u>Classification of defects</u>. The enumeration of possible defects of the unit or product, classified according to their seriousness. Defects will normally be grouped into the classes of critical, major or minor: however, they may be grouped into other classes, or into subclasses within these classes. (Source: MIL-STD-109)
- 3.8 Commercial and Government Entity (CAGE) Code. A five-position alphanumeric code with a numeric in the first and last positions (e.g., 27340, 2A345, 2AA45, 2AAA5), assigned to United States and Canadian organizations which manufacture and/or control the design of items supplied to a Government Military or Civil Agency or assigned to United States and foreign organizations, primarily for identifying contractors in the mechanical interchange of data required by MILSCAP and the Service/Agency Automated Data Processing (ADP) systems. (See 6.6)
 - 3.9 Computer database. See "database".

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- 3.10 Computer software. See "software".
- 3.11 <u>Computer Software Configuration Item (CSCI)</u>. A configuration item that is computer software.
- 3.12 <u>Computer software documentation</u>. Technical data or information, including computer listings, regardless of media, which documents the requirements, design, or details of computer software; explains the capabilities and limitations of the software; or provides operating instructions for using or supporting computer software during the software's operational life cycle.
- 3.13 <u>Configuration</u>. For purposes of this standard, the functional and physical characteristics of existing or planned hardware, firmware, software or a combination thereof as set forth in technical documentation and ultimately achieved in a

product.

- 3.14 <u>Configuration audit</u>. See "Functional configuration audit" and "Physical configuration audit".
- 3.15 <u>Configuration baseline</u>. Configuration documentation formally designated by the Government at a specific time during a CI's life cycle. Configuration baselines, plus approved changes from those baselines, constitute the current approved configuration documentation. There are three formally designated configuration baselines in the life cycle of a configuration item, namely the functional, allocated, and product baselines.
- 3.16 <u>Configuration control</u>. The systematic proposal, justification, evaluation, coordination, approval or disapproval of proposed changes, and the implementation of all approved changes, in the configuration of a CI after establishment of the configuration baseline(s) for the CI.
- 3.17 <u>Configuration Control Board (CCB)</u>. A board composed of technical and administrative representatives who recommend approval or disapproval of proposed engineering changes to a CI's current approved configuration documentation. The board also recommends approval or disapproval of proposed waivers and deviations from a CI's current approved configuration documentation.
- 3.18 Configuration documentation. The technical documentation that identifies and defines the item's functional and physical characteristics. The configuration documentation is developed, approved, and maintained through three distinct evolutionary increasing levels of detail. The three levels of configuration documentation are the functional configuration documentation, the allocated configuration documentation, and the product configuration documentation.
- 3.19 Configuration identification. Configuration identification includes the selection of CIs; the determination of the types of configuration documentation required for each CI; the issuance of numbers and other identifiers affixed to the CIs and to the technical documentation that defines the CI's configuration, including internal and external interfaces; the release of CIs and their associated configuration documentation; and the establishment of configuration baselines for CIs.
- 3.20 <u>Configuration Item (CI)</u>. A configuration item is an aggregation of hardware or software that satisfies an end use function and is designated by the Government for separate configuration management.

3.21 Configuration Management (CM).

- a. As applied to configuration items, a discipline applying technical and administrative direction and surveillance over the life cycle of items to:
 - (1) Identify and document the functional and physical characteristics of configuration items.
 - (2) Control changes to configuration items and their related documentation.
 - (3) Record and report information needed to manage configuration items effectively, including the status of proposed changes and implementation status of approved changes.
 - (4) Audit configuration items to verify conformance to specifications, drawings, interface control documents, and other contract requirements.
- b. As applied to digital data files, the application of selected configuration identification and configuration status accounting principles to:
 - (1) Uniquely identify the digital data files, including versions of the files and their status (e.g., working, released, submitted, approved).
 - (2) Record and report information needed to manage the data files effectively, including the status of updated versions of files.
- 3.22 <u>Configuration Management Plan (CMP)</u>. The document defining how configuration management will be implemented (including policies and procedures) for a particular acquisition or program.
- 3.23 <u>Configuration Status Accounting (CSA)</u>. The recording and reporting of information needed to manage configuration items effectively, including:
 - a. A record of the approved configuration documentation and identification numbers.
 - b. The status of proposed changes, deviations, and waivers to the configuration.
 - c. The implementation status of approved changes.

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- d. The configuration of all units of the configuration item in the operational inventory.
- 3.24 <u>Contractor</u>. An individual, partnership, company, corporation, association or other service, having a contract with the Government for the design, development, manufacture, maintenance, modification, or supply of items under the terms of a contract. A Government activity performing any or all of the above functions is considered to be a contractor for configuration management purposes.
- 3.25 <u>Data</u>. Recorded information, regardless of medium or characteristics, of any nature, including administrative, managerial, financial, and technical.
- 3.26 <u>Database</u>. A collection of related data stored in one or more computerized files in a manner that can be accessed by users or computer programs via a database management system.
- 3.27 <u>Defect</u>. Any nonconformance of a characteristic with specified requirements. (Source: MIL-STD-109)
 - 3.28 <u>Deficiencies</u>. Deficiencies consist of two types;
 - a. Conditions or characteristics in any item which are not in accordance with the item's current approved configuration documentation; or
 - b. Inadequate (or erroneous) item configuration documentation which has resulted, or may result, in units of the item that do not meet the requirements for the item.
 - 3.29 <u>Design change</u>. See "engineering change".
- 3.30 <u>Developmental configuration</u>. The contractor's design and associated technical documentation that defines the evolving configuration of a configuration item during development. It is under the developing contractor's configuration control and describes the design definition and implementation. The developmental configuration for a configuration item consists of the contractor's released hardware and software designs and associated technical documentation until establishment of the formal product baseline.
- 3.31 <u>Deviation</u>. A specific written authorization, granted prior to the manufacture of an item, to depart from a particular requirement(s) of an item's current approved configuration documentation for a specific number of units or a specified

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period of time. (A deviation differs from an engineering change in that an approved engineering change requires corresponding revision of the item's current approved configuration documentation, whereas a deviation does not.)

- 3.32 <u>Engineering change</u>. A change to the current approved configuration documentation of a configuration item at any point in the life cycle of the item.
- 3.33 Engineering change justification code. A code which indicates the reason for a Class I engineering change.
- 3.34 Engineering change priorities. The priority (emergency, urgent, routine) assigned to a Class I engineering change which determines the relative speed at which the Engineering Change Proposal is to be reviewed, evaluated, and, if approved, ordered and implemented.
- 3.35 <u>Engineering Change Proposal (ECP)</u>. A proposed engineering change and the documentation by which the change is described, justified, and submitted to the Government for approval or disapproval.
- 3.36 Engineering Change Proposal types. A term covering the subdivision of Class I Engineering Change Proposals on the basis of the completeness of the available information delineating and definir the engineering change. They will be identified as preliminary or formal.
- 3.37 <u>Engineering release</u>. An action whereby configuration documentation or an item is officially made available for its intended use.
- 3.38 Engineering Release Record (ERR). A record used to release configuration documentation.
- 3.39 <u>Evaluation</u>. The process of determining whether an item or activity meets specified criteria. (Source; DoD-STD -2168)
- 3.40 Exchangeability of items. See 3.55 Interchangeable item, 3.78 Replacement Item, and 3.82 Substitute item.
- 3.41 <u>Firmware</u>. The combination of a hardware device and computer instructions and/or computer data that reside as readonly software on the hardware device.
- 3.42 <u>Fit</u>. The ability of an item to physically interface or interconnect with or become an integral part of another item.

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- 3.43 <u>Form</u>. The shape, size, dimensions, mass, weight, and other visual parameters which uniquely characterize an item. For software, form denotes the language and media.
- 3.44 <u>Function</u>. The action or actions which an item is designed to perform.
- 3.45 <u>Functional area</u>. A distinct group of system performance requirements which, together with all other such groupings, forms the next lower-level breakdown of the system on the basis of function.
- 3.46 <u>Functional Baseline (FBL)</u>. The approved functional configuration documentation.
- 3.47 <u>Functional characteristics</u>. Quantitative performance parameters and design constraints, including operational and logistic parameters and their respective tolerances. Functional characteristics include all performance parameters, such as range, speed, lethality, reliability, maintainability, and safety.
- 3.48 <u>Functional Configuration Audit (FCA)</u>. The formal examination of functional characteristics of a configuration item, prior to acceptance, to verify that the item has achieved the requirements specified in its functional and allocated configuration documentation.
- 3.49 <u>Functional Configuration Documentation (FCD)</u>. The documentation describing the system's functional, performance, interoperability, and interface requirements and the verifications required to demonstrate the achievement of those specified requirements.
- 3.50 <u>Hardware</u>. Items made of materiel, such as weapons, aircraft, ships, tools, computers, vehicles, and their components (mechanical, electrical, electronic, hydraulic, pneumatic). Computer software and technical documentation are excluded.
- 3.51 <u>Hardware Configuration Item (HWCI)</u>. A configuration item that is hardware.
- approach to the activities necessary to: (a) cause support considerations to be integrated into system and equipment design, (b) develop support requirements that are consistently related to design and to each other, (c) acquire the required support, and (d) provide the required support during the operational phase at minimum cost. (Source: MIL-STD-1388-1)

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- 3.53 <u>Interchangeable item</u>. One which (1) possesses such functional and physical characteristics as to be equivalent in performance, reliability, and maintainability, to another item of similar or identical purposes; and (2) is capable of being exchanged for the other item (a) without selection for fit or performance, and (b) without alteration of the items themselves or of adjoining items, except for adjustments. (Source: MIL-STD -280)
- 3.54 <u>Interface</u>. The functional and physical characteristics required to exist at a common boundary.
- 3.55 <u>Interface control</u>. The process of identifying, documenting, and controlling all functional and physical characteristics relevant to the interfacing of two or more items provided by one or more organizations.
- 3.56 <u>Interface Control Documentation (ICD)</u>. Interface control drawing or other documentation which depicts physical and functional interfaces of related or co-functioning items.
- 3.57 <u>Interface Control Working Group (ICWG)</u>. For programs which encompass a system, configuration item, or a computer software configuration item design cycle, an ICWG is established to control interface activity among the Government, contractors, or other agencies, including resolution of interface problems and documentatic of interface agreements.
- 3.58 <u>Interoperability</u>. The ability of the defense services and agencies to exchange information with each other (joint operations) or with an allied system (combined operations) to enable them to operate effectively together.
- 3.59 <u>Item</u>. A non-specific term used to denote any product, including systems, materiels, parts, subassemblies, sets accessories, etc. (Source: MIL-STD-280)
- 3.60 <u>Life cycle</u>. A generic term covering all phases of acquisition, operation, and logistics support of an item, beginning with concept definition and continuing through disposal of the item.
- 3.61 <u>Life cycle cost</u>. The total cost to the Government of acquisition and ownership of that system over its life cycle. It includes the cost of development, acquisition, support, and where applicable, disposal.
- 3.62 <u>Manufacturer's code</u>. See "Commercial and Government Entity (CAGE) code".

- 3.63 <u>Material</u>. A generic term covering systems, equipment, stores, supplies, and spares, including related documentation, manuals, computer hardware, and software.
- 3.64 <u>Non-conformance</u>. The failure of a unit or product to conform to specified requirements.
- 3.65 <u>Non-developmental Item (NDI)</u>. Non-developmental item is a broad generic term that covers material available from a wide variety of sources with little or no development effort required by the Government. NDIs include:
 - a. Items obtained from a domestic or foreign commercial marketplace.
 - b. Items already developed and in use by the Services, other Defense activities, and Government agencies.
 - c. Items already developed by foreign governments which can be supplied in accordance with mutual defense cooperation agreements and Federal and DoD acquisition regulations. (SD-2)
- 3.66 Non-recurring costs. As applied to ECPs, these are one time costs, which will be incurred if an engineering change is approved and which are independent of the quantity of items changed, such as cost of redesign, special tooling, or testing.
- 3.67 <u>Notice of Revision (NOR)</u>. A document used to define revisions to drawings, associated lists, or other referenced documents which require revision after Engineering Change Proposal approval.
- 3.68 <u>Original</u>. The current design activity document or digital data file(s) of record.
- 3.69 <u>Physical characteristics</u>. Quantitative and qualitative expressions of material features, such as composition, dimensions, finishes, form, fit, and their respective tolerances.
- 3.70 <u>Physical Configuration Audit (PCA)</u>. The formal examination of the "as-built" configuration of a configuration item against its technical documentation to establish or verify the configuration item's product baseline.

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- 3.71 <u>Product Baseline (PBL)</u>. The approved product configuration documentation. In addition to this documentation, the product baseline of a configuration item may include the actual equipment and software.
- 3.72 Product Configuration Documentation (PCD). The combined performance/design documentation utilized for the production/ procurement of the CI. The PCD incorporates the ACD describing a CI's functional, performance, interoperability and interface requirements and the verifications required to confirm the achievement of those specified requirements. The PCD also includes such additional design documentation, ranging from form and fit information about the proven design to a compete design disclosure package, as is deemed necessary for the acquisition program.
- 3.73 <u>Recurring costs</u>. Costs which are incurred for each item changed or for each service or document ordered.
- 3.74 <u>Release</u>. The designation by the contractor that a document is complete and suitable for use. Release means that the document is subject to the contractor's configuration control procedures.
- 3.75 Repair. A procedure which reduces but not completely eliminates a nonconformance and which has been reviewed and concurred in by the MRB and approved for use by the Government. The purpose of repair is to reduce the effect of the nonconformance. Repair is distinguished from rework in that the characteristic after repair still does not completely conform to the applicable drawings, specifications, or contract requirements. Proposed repairs approved by the Government are authorized for use on a one-time basis only. (Source: MIL-STD -1520)
- 3.76 Replacement item. One which is interchangeable with another item, but which differs physically from the original item in that the installation of the replacement item requires operations such as drilling, reaming, cutting, filing, shimming, etc., in addition to the normal application and methods of attachment. (Source: MIL-STD-280)
- 3.77 <u>Retrofit</u>. The incorporation of new design parts resulting from an approved engineering change to an item's current approved product configuration documentation into already accepted and/or operational items.
- 3.78 <u>Rework</u>. A procedure applied to a nonconformance that will completely eliminate it and result in a characteristic that conforms completely to the drawings, specifications, or contract requirements. (Source: MIL-STD-1520)

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3.79 <u>Software</u>. Computer programs and computer databases.

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- 3.80 <u>Software unit</u>. A logical element in the design of a CSCI; for example, a major subdivision of a CSCI, a component of that subdivision, a class, object, module, function, routine, or database. Software units may occur at different levels of a hierarchy and may consist of other software units. Software units in the design may or may not be in a one-to-one relationship with the code and data entities (routines, procedures, databases, datafiles, etc.) that implement them, or with the computer files containing those entities.
- 3.81 <u>Specification</u>. A document prepared specifically to support acquisition which clearly and accurately describes essential technical requirements for purchasing materiel. Procedures necessary to determine that the requirements for the materiel covered by the specification have been met are also included. (Source: MIL-STD-961)
- . 3.82 <u>Specification Change Notice (SCN)</u>. A document used to propose, transmit, and record changes to a specification.
- 3.83 <u>Substitute item</u>. One which possesses such functional and physical characteristics as to be capable of being exchanged for another only under specified conditions or in particular applications and without alteration of the items themselves or of adjoining items. (Source; MIL-STD-280)
- 3.84 <u>Support equipment</u>. Equipment and computer software required to maintain, test, or operate an item or facility in its intended environment.
- 3.85 <u>Survivability</u>. The capability of a system to avoid or withstand a hostile environment without suffering an abortive impairment of its ability to accomplish its designated mission.
- 3.86 <u>System</u>. A composite of equipment, skills, and techniques capable of performing or supporting and operational role, or both. A complete system includes all equipment, related facilities, material, software, services and personnel required for its operation and support to the degree that it can be considered a self-sufficient unit in its intended operational environment. (Example: Dew Line.) (Source: MIL-STD -280)
- 3.87 <u>Technical data</u>. Technical data is recorded information (regardless of the form or method of recording) of a scientific or technical nature (including computer software documentation) relating to supplies procured by an agency. Technical data does not include computer software or financial, administrative, cost or pricing, or management data or other

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information incidental to contract administration.

- a. Technical data is required to define and document an engineering design or product configuration (sufficient to allow duplication of the original items) and is used to support production, engineering, and logistics activities.
- b. A technical data package should include all engineering drawings, associated lists, process descriptions, and other documents which define the physical geometry, material composition, performance characteristics, manufacture, assembly, and acceptance test procedures.
- c. Technical data which provides instructions for the installation, operation, maintenance, training, and support of a system or equipment can be formatted into a technical manual.
 - (1) A technical manual normally includes operation and maintenance instructions, parts lists or parts breakdown, and related technical information or procedures exclusive of administrative procedures.
 - (2) This data may be presented in any form (e.g., hard copy, audio and visual displays, magnetic tape, disks, or other electronic devices).
 - (3) Technical orders that meet the criteria of this definition may also be classified as technical manuals. (Title 10, United States Code, Section 2302, "Definitions")
- 3.88 Technical data package. See "Technical data".
- 3.89 <u>Technical documentation</u>. See "Technical data".
- 3.90 Technical reviews. A series of system engineering activities by which the technical progress on a project is assessed relative to its technical or contractual requirements. The reviews are conducted at logical transition points in the development effort to identify and correct problems resulting from the work completed thus far before the problems can disrupt or delay the technical progress. The reviews provide a method for the contractor and Government to determine that the development of a configuration item and its documentation have met contract requirements.

- a. Are used to train maintenance and operator personnel by depicting, simulating, or portraying the operational or maintenance characteristics of an item or facility.
- b. Are kept consistent in design, construction, and configuration with such items in order to provide required training capability.
- 3.92 <u>Unit</u>. An assembly or any combination of parts, subassemblies and assemblies mounted together, normally capable of independent operation in a variety of situations. (Examples: Hydraulic jack, electric motor, electronic power supply, internal combustion engine, electric generator, radio receiver.) This term replaces the term "component." Note. The size of an item is a consideration in some cases. An electric motor for a clock may be considered as a part inasmuch as it is not normally subject to disassembly. (Source: MIL-STD-280)
- 3.93 <u>Version</u>. An identified and documented body of software. Modifications to a version of software (resulting in a new version) require configuration management actions by either the contractor, the Government, or both.
- 3.94 <u>Waiver</u>. A written authorization to accept an item, which during manufacture, or after having been submitted for Government inspection or acceptance, is found to depart from specified requirements, but nevertheless is considered suitable for use "as is" or after repair by an approved method.
- 3.95 Work Breakdown Structure (WBS). A work breakdown structure (WBS) is a product-oriented family tree composed of hardware, software, services, data and facilities which results from systems engineering efforts during the acquisition of a defense material item. A work breakdown structure displays and defines the product(s) to be developed and/or produced and relates the elements of work to be accomplished to each other and to the end product(s). (Source: MIL-STD-881)
- 3.96 Work breakdown structure element. A work breakdown structure element is a discrete portion of a work breakdown structure. A work breakdown structure element may be an identifiable item of hardware, software, services, data or facilities. (Source: MIL-STD-881)

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4. GENERAL REQUIREMENTS

- 4.1 <u>Basic requirements</u>. The contractor shall implement an internal configuration management system for the control of all configuration documentation, physical media, and physical parts representing or comprising the product. For software, the system shall address the evolving developmental configuration and support environments (engineering, implementation and test) used to generate and test the product. The contractor's configuration management system shall consist of the following elements:
 - a. Configuration identification.
 - b. Configuration control.
 - c. Configuration status accounting.
 - d. Configuration audits.

Contractors shall implement the requirements of this standard as identified in the contract statement of work (SOW) to CIs and shall insure compliance with those requirements by subcontractors.

- 4.2 <u>Planning</u>. The contractor shall plan a configuration management program in accordance with the requirements of this standard, tailored appropriately for the particular CI(s), their scope and complexity, and the contracted phase(s) of the life cycle. Planning shall be consistent with the objectives of a continuous improvement program which includes the analysis of identified problem areas and correction of procedures as necessary to prevent reoccurrence. The contractor's configuration management planning shall include:
 - The objectives of the configuration management program and of each applicable configuration management element;
 - b. The configuration management organization and organizational relationships;
 - c. Responsibilities and authority of configuration management managers;
 - d. Configuration management resources (tools, techniques, and methodologies);

- e. Coordination with internal and external agencies (e.g., program managers, other contractors, other Government agencies, CCBs, foreign governments);
- f. Configuration management policies, processes, procedures, methods, records, reports and forms; and
- g. Computer-aided Acquisition and Logistics Support (CALS) configuration management in accordance with paragraph 4.3.
- 4.3 Computer-aided Acquisition and Logistic Support (CALS). Configuration documentation shall be provided in either hard copy data transfer, transfer of processable data files, interactive access to data through contractor integrated technical information services, or a combination of the above, as specified in the contract. The contractor's planning shall address all configuration management technical data requirements of the contract as far as data handling, processing, storage, integrity, transfer, security, and maintenance are concerned, over the performance period of the contract. The contractor shall propose to the Government, as applicable and in accordance with the changes clause of the contract, any requirements that may be imposed on the Government that will require associated contractor effort to maintain the security and integrity of shared data.
- 4.3.1 <u>Data distribution/access</u>. The contractor shall affix distribution statements to technical data in accordance with the contract. Access to data shall be limited in accordance with the applicable distribution statements, as well as by data rights, Contract Data Requirements List (CDRL) distribution, security requirements, and data status level (released, submitted or approved unless otherwise specified). (See 6.6)
- 4.3.2 <u>Automated processing and submittal of data</u>. To facilitate processing of submitted data, the contractor shall use automated processing and electronic submittal techniques, when specified in the contract. Where the data requirement is for data that is illustrated, for reference purposes, herein on a DD Form (e.g., DD Form 1692 for an ECP), the contractor may sequentially address the essential and applicable data elements of the submitted data by block number and title, or may provide the data on an electronic version of the form as desired. Textual data in electronic form shall be by paragraph number, or topic heading, as applicable, in accordance with the format and content requirements for the data specified in the contract.
 - a. When data are submitted by electronically transferring (e.g., modem) by the contractor to the Government, acknowledgement of receipt will be generated at the end

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of the transmission. When data is electronically transferred by the Government to the contractor, acknowledgement of receipt by the contractor shall be generated at the end of the transmission. The contractor shall implement a method of error detection for data transfer to insure deliverable data products are capable of being recreated in human readable format.

- b. The contractor shall maintain the current status (working, released, submitted, approved) of all digital technical data in the data base at all times. Any data electronically transferred by the contractor to the Government shall be so identified.
- c. The contractor shall implement procedures to identify and control data during the contractor and Government review and update cycle. As a minimum, these procedures shall address:
 - (1) Identification of data files submitted to the Government for review, annotation, comment and approval/disapproval, as applicable in accordance with Government specified review and approval requirements. Each submitted digital data file shall have a unique identifier (e.g., file name) which shall indicate file version, and "submitted" status. To assure file integrity, the file naming convention shall distinguis an altered (annotated, redlined) file version from the originally submitted file version by renaming it as a separate working status file.
 - (2) . How data and changes are transmitted.
 - (3) How changes from previous versions are indicated.
 - (4) Notification/acknowledgement of receipt, return, or acceptance.
 - (5) Indication of time constraints, if any, for automatic data acceptance; and
 - (6) Data status accounting.
- 4.3.3 <u>Interactive access to digital data</u>. In addition to the above requirements, the contractor's integrated technical information service shall, where contractually specified, accommodate pre-defined query and extraction of data and shall

Additional PCAs may be performed during production for selected changes to the item's configuration documentation or when contractors are changed. The contractor, in accordance with the terms of the contract, tasked with the development or production of the item shall:

- a. Support the conduct of the FCA/PCA.
- b. Participate in the resolution of discrepancies identified during the conduct of the FCA/PCA.

5. DETAILED REQUIREMENTS

- 5.1 <u>Purpose</u>. The purpose of this section is to identify detailed requirements that should be selectively applied to a configuration management program.
 - 5.2 Configuration management administration.
- 5.2.1 <u>Contractor's CM Plan</u>. The Contractor's Configuration Management Plan shall be in accordance with the requirements of the contract and shall describe the processes, methods, and procedures to be used to manage the functional and physical characteristics of the assigned CI(s). The contractor shall:
 - a. Develop the Contractor's Configuration Management Plan in accordance with the requirements of Appendix A (See 6.3);
 - b. Submit the plan and changes thereto in accordance with the CDRL; and
 - c. Implement the activities required by this standard in accordance with the approved plan.
- 5.2.2 Work Breakdown Structure (WBS). The contractor shall ensure traceability of CIs to the WBS elements when a WBS is invoked in the contract.
- 5..2.3 Technical reviews. The contractor shall ensure that the configuration management representatives participate in all technical reviews conducted in accordance with the contract requirements. The role of configuration management in the technical review process shall include evaluating the adequacy of the type and content of the configuration documentation, ascertaining that the configuration documentation is under formal Government and/or internal configuration control, and determining whether problems/action items identified at the review will require submittal of Engineering Change Proposals against the current approved configuration documentation.

- 5.3.4 Configuration baselines. Configuration management normally employs three types of configuration baselines, the functional, allocated, and product baselines, to provide for the progressive definition and documentation of the requirements and design information describing the various CIs designated for a system. The contractor shall recommend to the Government the types of specifications and associated documentation to a level of detail commensurate with logistic support requirements and procurement strategies that should be used to define each CI; however, the actual specifications provided shall be those ultimately ordered in the contract. Those specifications are subject to review and approval/contractual implementation by the Government. The appropriate baseline for each CI shall be established with the approval/contractual implementation of that specification as defined in the contract. (See 6.3)
- 5.3.4.1 Configuration baselines and their configuration documentation. The contractor shall generate the configuration documentation required for the configuration baselines being established by the Government. The FCD, ACD, and PCD defining the configuration baselines shall be mutually consistent and compatible. Each succeeding level of configuration documentation from FCD to ACD to PCD shall be traceable to, and be a detailed extension of, its predecessor(s). If a conflict arises between levels of documentation, the order of precedence shall be (1) FCD, (2) ACD, and (3) PCD.
- 5.3.4.1.1 Functional Configuration Documentation (FCD). The contractor shall generate the documentation required for the functional baseline. The FCD shall be in the form of a system specification for a system, plus other applicable documentation (for example, Interface Requirements Specifications and Interface Control Documents for the system). (For Programs or contracts involving the development of a single CI, a system specification should not be generated.) The FCD shall also identify the configuration documentation for selected items which are to be integrated or interfaced with the CI, such as items separately developed or currently in the inventory.
- 5.3.4.1.2 Allocated Configuration Documentation (ACD). The contractor shall generate the documentation required for the allocated baseline for each CI. The ACD shall define requirements allocated from the FCD or from a higher level CI to a lower level CI. The ACD for the CI shall be in the form of an item or software requirements specification, and other referenced documentation (for example, Interface Control Documents, Interface Requirements Specifications and item or software requirements specifications for lower-level CI(s), if any). (For programs or contracts involving the development of a single CI, the CI specifications may serve as both the functional and allocated baselines.)

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- 5.3.4.1.3 <u>Product Configuration Documentation (PCD)</u>. The contractor shall generate the documentation required for the product baseline in accordance with the requirements of the contract. The PCD shall be in the form of item, software, material, and process specifications, engineering drawings, software listings, software design documentation, military specifications, and other technical documentation comprising a complete technical data package for the CI. The PCD may also be in the form of the actual equipment and/or software media. The PCD shall prescribe the necessary physical and functional characteristics of the CI and the verifications required to demonstrate required performance.
- 5.3.4.2 <u>Maintenance of configuration documentation</u>. Once the related configuration baseline has been established, the contractor shall control and maintain the originals of the current approved configuration documentation for all configuration items specified in the contract.
- 5.3.5 Engineering release and correlation of manufactured The contractor shall establish/maintain an engineering release system and shall use the system to issue configuration documentation to functional activities (e.g., manufacturing, logistics, quality assurance, acquisition) and to authorize the use of configuration documentation associated with an approved configuration. The contractor shall maintain current and historical engineering release information for all configuration documentation of all configuration items and their component parts. The engineering release system shall interrelate with the contractor's internal system of controls to assure that all engineering changes have been incorporated in production items as specified. The contractor's engineering release and control system shall meet the minimum information content requirements and tracking capabilities specified in Appendix B for verifying that manufactured products correlate with the released engineering data.
- 5.3.5.1 Specification release and approval. The contractor shall include on each CI specification a contractor's release signature indicating that the document has been reviewed and is suitable for its intended use. In addition, the contractor shall submit each such specification to the Government for an approval signature. Approval by the Government will normally be accomplished on the version of the specification submitted for a

baseline. Completion of the release and approval activities indicates mutual acceptance by the Government and the contractor of the CI's requirements, as defined in the specification and referenced documents. After approval the specification establishes the appropriate baseline.

5.3.5.2 Requirements for Engineering Release Records (ERRs).

5.3.5.2.1 <u>Use of ERRs</u>. The contractor shall generate an ERR containing the information required by Appendix C to authorize the use of new or revised configuration documentation. The Government approved ERR authorizes the use of the approved configuration documentation by all activities. The contractor shall also ensure that information about the new approved configuration documentation is incorporated into the CSA information system. (See 4.3.2 and 6.3)

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- 5.3.5.2.2 <u>Establish configuration baselines</u>. Configuration documentation comprising a baseline shall be initially entered into the Government's configuration status accounting information system, by means of a Government-approved ERR. Such documentation, software or combinations thereof shall only be submitted as a complete package, except under extraordinary circumstances as approved by the Government.
- 5.3.5.2.3 <u>Changes</u>. Revised configuration documentation shall be entered into the Government's configuration status accounting information system by means of a Government-approved ERR. Such documentation, software, or combinations thereof shall only be submited as a complete package, except under extraordinary circumstances as approved by the Government.
- 5.3.5.2.4 Consolidation of multiple changes into a single ERR. Unrelated ECPs may be combined into a single ERR if they were incorporated as a single revision to a document.

- 5.3.6 <u>Configuration identifiers</u>. CIs and their configuration documentation shall be assigned unique identifiers as described below.
- 5.3.6.1 <u>CAGE Code</u>. The design activities and the manufacturers of CIs shall be identified by the Government assigned CAGE Code, which shall be affixed to all CIs, their subordinate parts and assemblies, configuration documentation, software media and products.
- 5.3.6.2 Government type designators and nomenclature. Each CI that is designated by the Government for control, tracking and logistics purposes shall be assigned Government type designators and nomenclature in accordance with the requirements of the contract.
- 5.3.6.3 <u>Document numbers</u>. An identification number shall be assigned and applied to specifications and to all revisions thereto; and to engineering drawings, associated lists and ancillary documents and to all revisions thereto. (See 6.6)
- 5.3.6.4 <u>Part/item identification numbers</u>. A discrete part/item identification number shall be assigned to each CI and its subordinate parts and assemblies and be changed whenever a non-interchangeable condition is created. (See 6.6)
- 5.3.6.5 <u>Software identifiers</u>. For each CSCI, the contractor shall identify its corresponding software units. For each CSCI and associated software units the contractor shall issue/obtain a software identifier, which shall consist of a name or number, and a version identifier, and shall relate the software to its associated software design documentation; revision; and release date. The contractor shall embed the software and version identifiers within the source code, and provide a method for display of the software and version identifier data to the user upon command.
- 5.3.6.6 <u>Serial/lot numbers</u>. The contractor shall assign serial/lot numbers to like items, or to groups (lots) of like items, identified with a specific Government nomenclature, unless otherwise specified in the contract. The serial/lot numbers

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shall be:

- a. A maximum of 15 alphanumeric characters, with at least the last 4 numeric.
- b. Unique, consecutive, and non-duplicating for all items with that specific nomenclature.
- 5.3.6.6.1 Government serial numbers. The Government will identify the serial numbers that shall be affixed to Government designated deliverable CIs by the contractor.
- 5.3.6.6.2 Reuse of serial numbers. The original serial number of a unit/item/CI shall not be changed even when a change affecting interchangeability may require rework and reidentification. Once assigned, serial numbers shall not be reused for the same item/unit/CI.
- 5.3.6.7 <u>Product identification/marking</u>. Unless otherwise specified in the contract, all CIs including parts, assemblies, units, sets and other pieces of military property shall be marked with their identifiers. (See 6.6)
- 5.3.6.7.1 <u>Software marking and labeling</u>. The marking and labeling of software shall be as follows:
 - a. Software identifier and version and Computer Program Identification Number (CPIN), where applicable, shall be embedded in the source code header.
 - b. Each software medium (e.g., magnetic tape, disk) containing copies of tested and verified software entities shall be marked with a label containing, or providing cross-reference to, a listing of the applicable software identifiers of the entities it contains.
 - c. Media for deliverable CSCIs shall be labeled with the Government Contract number, CSCI Number, CPIN or other Government identifier (if applicable), Design activity CAGE Code, Media Number (e.g., 1 of 2, 2 of 2) if there are multiple units per set and copy number of the medium or media set (if there is more than one copy being delivered).
 - d. Media copy numbers shall distinguish each copy of the software media from its identical copies. Each time a new version of software is issued, new copy numbers, starting from 1, shall be assigned.

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- 5.3.6.7.2 <u>Firmware labeling</u>. Firmware shall be labeled on the device or, if the device is too small, on the next higher assembly, as follows:
 - a. Where both the hardware device and the embedded code are controlled via a single engineering drawing, the part number representing the device with the code embedded shall comprise the label.
 - b. Where the PCD for the source code consists of a software product specification, both the unloaded device part number and the software identifier of the embedded code, including version number, shall comprise the label. In addition, the software identification(s) shall be labeled on an identification plate or decal located adjacent to the nameplate on the equipment containing the firmware.
- 5.3.6.7.3 NDI, COTS, and PDI labeling. When a CI is wholly developed with private funding and modified to satisfy Government requirements, the CI shall be re-identified as a Government modified CI, and documented and controlled in accordance with the requirements of the contract.

5.3.7 <u>Interface management</u>.

- 5.3.7.1 <u>Interface requirements</u>. The interface requirements for the system and its configuration items shall be identified as a part of the system engineering process. Those interface requirements which must be controlled by the Government during the development of the system shall be incorporated into the FCD and/or ACD as applicable. Such interface requirements defined in baselined specifications shall be subject to the configuration control requirements of this standard. Prior to the PBL, the contractor shall be responsible for defining and controlling all interfaces below the ACD level. The contractor shall ensure the compatibility and interoperability among the various hardware and software components for which he is the design activity and between those components and the interfaces/components specified in the baselined configuration documentation. (See 6.3)
- 5.3.7.2 Requirements for an Interface Control Working Group (ICWG). When required, the use of an ICWG will be specified by the contract and the interface control contractor will be identified. The contractor shall establish associate contractor agreements with interfacing contractors governing the conduct of interface control.

- (1) Performance.
- (2) Reliability, maintainability or survivability.
- (3) Weight, balance, moment of inertia.
- (4) Interface characteristics.
- (5) Electromagnetic characteristics.
- (6) Other technical requirements in the specifications.

NOTE: Minor clarifications and corrections to FCD or ACD shall be made only as an incidental part of the next Class I ECP and accompanying SCN or NOR, unless otherwise directed by the Government.

- b. A change to the PCD, once established, will affect the FCD or ACD as described in 5.4.2.2.1a or will impact one or more of the following:
 - (1) GFE.
 - (2) Safety.
 - (3) Compatibility or specified interoperability with interfacing CIs, support equipment or support software, spares, trainers or training devices/ equipment/software.
 - (4) Configuration to the extent that retrofit action is required.
 - (5) Delivered operation and maintenance manuals for which adequate change/revision funding is not provided in existing contracts.
 - (6) Preset adjustments or schedules affecting operating limits or performance to such extent as to require assignment of a new identification number.
 - (7) Interchangeability, substitutability, or replaceability as applied to CIs, and to all subassemblies and parts except the pieces and parts of non-reparable subassemblies.

- (8) Sources of CIs or repairable items at any level def. __d by source-control drawings.
- (9) Skills, manning, training, biomedical factors or humanengineering design.
- c. Any of the following contractual factors are affected:
 - (1) Cost to the Government including incentives and fees.
 - (2) Contract guarantees or warranties.
 - (3) Contractual deliveries.
 - (4) Scheduled contract milestones.
- 5.4.2.2.2 Classifying engineering changes to a privately developed item. An engineering change to a PDI shall be classified Class I when it affects the contractually specified form, fit, function, or logistics support of an item or factors in 5.4.2.2.1c. When a greater degree of control is negotiated between the Government and the contractor, effects on other factors may be added to the effects on form, fit or function factors which classify an engineering change as Class I.
- 5.4.2.3.3 Content of Engineering Change Proposals (ECP#). S 5.4.2.3.5 and 5.4.2.4.1
- 5.4.2.3.1 <u>Unrelated engineering changes</u>. A separate ECP shall be required for each engineering change which has its own distinct objective.
- 5.4.2.2.3.2 <u>Revisions of ECPs</u>. An ECP shall be revised when alterations or changes to the initial ECP are necessary. The first revision to an ECP shall be identified by the entry of "R1" in the revision block of the ECP. Further revisions of the same ECP shall be identified by the entry of "R2", "R3", etc. The date of the ECP shall be the submission date of the revision.
 - a. Major revisions to an ECP shall be made as a complete revised and resubmitted, package.

- b. Minor revisions to an ECP (such as those which correct errors, add or delete information, update pricing, or provide clarifications) may be made by attaching new or revised pages, indicating the new date and revision level on each such page, of the ECP. This will necessitate changing the page containing the date and revision level (Blocks 1 and 8f), even if no other data on that sheet changed.
- c. In either case, the information which differs from the original ECP shall be clearly identified in a manner similar to the marking of change pages for specifications. Block 19 of the ECP should include information as to whether the revision is a resubmittal, replacing the existing ECP in its entirety, or provides change pages to the existing ECP.
- 5.4.2.2.3.3 <u>Supporting data</u>. Formal ECPs shall be supported by drawings and other data (e.g., LSA data, detailed cost proposal data, test data and analyses) as specified in the contract to justify and describe the change and to determine its total impact including assessments of changes to system operational employment characteristics. When a life cycle cost and/or operation and support cost model has been included in the contract, the ECP shall also include the costs expected to result from the implementation of this change into all future production and spare items projected to be procured for the program and all projected operation and support costs for operation of the total inventory of items by the Government. A summary of any testing done by the contractor to validate concepts or new technology to be employed in the proposed engineering change shall be presented in the supporting data, and details of such test data shall be provided if it is vital to the decision regarding acceptance of the change.
- 5.4.2.2.3.4 <u>Classified data</u>. When practicable, the ECP should be unclassified. Classified data essential to the evaluation and disposition of an ECP shall be submitted separately in accordance with the approved security procedures and referenced in the unclassified portion of the ECP. The contractual DD Form 254 or DoD Contract Security Classification Specification applies.
- 5.4.2.3 Class I engineering change proposals. Class I engineering changes should be limited to those which are necessary or offer significant benefit to the Government. Such changes are those required to:
 - a. Correct deficiencies.

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- b. Add or modify interface or interoperability requirements.
- c. Make a significant and measurable effectiveness change in the operational capabilities or logistics supportability of the system or item.

- d. Effect substantial life cycle costs/savings, or
- e. Prevent slippage in an approved production schedule.
- 5.4.2.3.1 Class I ECP decisions.
- 5.4.2.3.1.1 Target for technical decision on Class I ECPs. The criticality of the need for decision will dictate the actual processing time for ECPs. Emergency and urgent ECPs should be proposed based upon the targets below unless otherwise agreed to between the contractor and the Government. Processing targets for routine ECPs will be tailored to maximize cost effectiveness, recognizing the program, system, and ECP complexity. The target for technical decision on Class I ECPs assigned the various priorities (see 5.4.2.3.4) will be the following:

a. Emergency 48 hours

b. Urgent 30 calendar days

c. Routine 90 calendar days

- 5.4.2.3.1.2 <u>ECP authorization</u>. Unless otherwise specified by the Government, receipt of contractual authorization shall constitute the sole authority for the contractor to effect a Class I change. Authorization of the change granted by the Government will include reference to the ECP by number, revision (if applicable), and date. Such authorization will normally not occur until the Government has performed a review for technical adequacy and supportability.
- 5.4.2.3.1.3 Class I compatibility engineering changes. category of change is intended to allow expeditious corrective action when the need for a change has been discovered during system or item functional checks or during installation and checkout. The contractor shall notify the Government by written message within 48 hours after determining that a compatibility change is necessary. The message shall define the need for a compatibility change and identify factors that will be impacted, including estimated costs and schedules. Unless otherwise prohibited by the contract, corrective action may then be implemented immediately by the contractor to resolve such incompatibilities, but only for the specific item(s) situated in the location at which the deficiency was originally discovered. aspects of the compatibility definition (reference paragraph 5.4.2.3.2b) must apply. In addition, a Class I compatibility ECP shall be required within 30 days after initial notification. Where further action is necessary due to "lead time" considerations, the contractor may initiate procurement or

manufacturing action and shall advise the Government with a change message referencing the serial number(s) and locations of additional items involved. The contractor assumes total risk for implementation of such a change prior to Government authorization, except in those cases where the Government caused the incompatibility.

- 5.4.2.3.1.4 <u>Disapproval of ECPs</u>. When the Government disapproves an ECP, the originator will be notified in writing within 30 calendar days of the decision and will be given the reason(s) for the disapproval.
- 5.4.2.3.2 <u>Class I ECP justification codes</u>. Justification codes corresponding with the criteria necessary for beneficial engineering changes are listed below. If more than one of these codes are applicable, the one which is the most descriptive or significant shall be assigned to the ECP.
 - a. <u>Interface (Code B)</u>. Code B shall be assigned to an engineering change proposed to eliminate incompatibility between CIs.
 - b. <u>Compatibility (Code C)</u>. Code C shall be assigned to an engineering change to correct a deficiency with the following characteristics:
 - (1) The need for the change has been discovered during the system or item functional checks or during installation and checkout and is necessary to make the system or item work.
 - (2) By assigning the compatibility code the contractor is declaring that the effort required to accomplish the change is considered to be within the scope of the existing contract except for changes caused by the Government.
 - (3) Contractual coverage completing the formal documentation of the engineering change will not reflect an increase in contract price for the corrective action in production and to delivered items in-warranty or otherwise stipulated in the contract.
 - c. <u>Correction of deficiency (Code D)</u>. Code D shall be assigned to an engineering change which is required to eliminate a deficiency, unless a more descriptive separate code applies. Such separate codes are used to

identify deficiencies of the nature of safety, interface, o' compatibility.

- d. Operational or logistics support (Code O). Code O shall be assigned to an engineering change which will make a significant effectiveness change in operational capabilities or logistics support.
- e. <u>Production stoppage (Code P)</u>. Code P shall be assigned to an engineering change which is required to prevent slippage in an approved production schedule. This code applies when production to the current configuration documentation either is impracticable or cannot be accomplished without delay.
- f. Cost reduction (Code R). Code R shall be assigned to an engineering change which will provide a net total life cycle cost savings to the Government, but which is not being submitted pursuant to the Value Engineering clause of the contract. The savings in life cycle cost should include all effects on cost and price for the effort and requirements covered by the contract(s) currently in effect for this contractor, plus the costs resulting from necessary associated changes in delivered items, and logistics support.
- g. <u>Safety (Code S)</u>. Code S shall be assigned to an engineering change for correction of a deficiency which is required primarily to eliminate a hazardous condition. When this code is assigned, a system hazard analysis shall be included with the ECP. (See 6.6)
- h. <u>Value engineering (VE) (Code V)</u>. Code V shall be assigned to an engineering change which will effect a net life cycle cost reduction and which is submitted pursuant to the VE clause of the contract.

topic for a change proposal. (Emergency, urgent, and compatibility type ECPs do not require an ACSN prior to submittal.) contractor originates a change idea, the required information shall be provided for Government review. Upon receipt of a Governmentoriginated ACSN, the contractor shall evaluate the change idea (and any alternative courses of action identified by the Government). If authorized to do so by the contract or the ACSN transmittal letter. and if in agreement with the change idea, the contractor shall proceed with preparation of the formal Routine ECP. Otherwise, the contractor shall provide additional information about the change to the Government for further study. In any case, the contractor shall not proceed with the preparation of the formal ECP until directed to do so by the Government. The DD Form 2616, "Advanced Change Study Notice (ACSN), " Figure 1, is not a requirement of this standard and is for reference only. Detailed instructions on the information required for an ACSN are noted in Blocks 6 through 10 of Figure 1. ACSN's shall be prepared in contractor format containing the information required in Figure 1 in Block number sequence. ACSNs are required by the contract, the procedures shall be documented in the CM Plan.) (See 4.3.2 and 6.3)

- 5.4.2.3.3.2 <u>Use of Formal ECP (Type F)</u>. A formal ECP is the type which provides engineering information and other data in sufficient detail to support formal change approval/contractual implementation.
- 5.4.2.3.4 Class I engineering change priorities. A priority shall be assigned to each Class I ECP based upon the following definitions. The assigned priority will determine the time frame in which the ECP is to be reviewed, evaluated, ordered, and implemented. The proposed priority is assigned by the originator and will stand unless the Government has a valid reason for changing the priority.
 - a. <u>Emergency</u>. An emergency priority shall be assigned to an engineering change proposed for either of the following reasons:
 - (1) To effect a change in operational characteristics which, if not accomplished without delay, may seriously compromise national security;
 - (2) To correct a hazardous condition which may result in fatal or serious injury to personnel or in extensive damage or destruction of equipment. (A hazardous condition usually will require withdrawing the item from service temporarily, or suspension of the item operation, or discontinuance of further testing or development pending resolution of the condition.); or

- (3) To correct a system halt (abnormal termination) in the production environment such that CSCI mission accomplishment is prohibited.
- b. <u>Urgent</u>. An urgent priority shall be assigned to an engineering change proposed for any of the following reasons:
 - (1) To effect a change which, if not accomplished expeditiously, may seriously compromise the mission effectiveness of deployed equipment, software, or forces; or
 - (2) To correct a potentially hazardous condition, the uncorrected existence of which could result in injury to personnel or damage to equipment. (A potentially hazardous condition compromises safety and embodies risk, but within reasonable limits, permits continued use of the affected item provided the operator has been informed of the hazard and appropriate precautions have been defined and distributed to the user.); or
 - (3) To meet significant contractual requirements (e.g., when lead time will necessitate slipping approved production or deployment schedules if the change was not incorporated); or
 - (4) To effect an interface change which, if delayed, would cause a schedule slippage or increase cost; or
 - (5) To effect a significant net life cycle cost savings to the Government, as defined in the contract, through value engineering or through other cost reduction efforts where expedited processing of the change will be a major factor in realizing lower costs.
 - (6) To correct unusable output critical to mission accomplishment;
 - (7) To correct critical CI files that are being degraded; or

- (8) To effect a change in operational characteristics to implement a new or changed regulatory requirement with stringent completion date requirements issued by an authority higher than that of the functional proponent.
- c. <u>Routine</u>. A routine priority shall be assigned to a proposed engineering change when emergency or urgent is not applicable.
- 5.4.2.3.4.1 Expediting Class I engineering changes with priority of emergency or urgent. ECPs carrying a priority of emergency shall, and ECPs carrying a priority of urgent may, be reported to the Government by telephone, message, personal contact, electronic transmission or other expeditious means. All communications shall be identified by the ECP number. If the initial communication regarding a proposed change was by other than written message, it shall be confirmed by written message in a format essentially similar to Figure 2 within 24 hours, and followed by a formal ECP within 30 days after the first communication unless otherwise specified by the Government. However, if it is impractical to complete a formal ECP within 30 days due to the necessity for extensive development, a preliminary ECP may be submitted within a 30 day period followed by a formal ECP at a specified interval thereafter. The preliminary or formal ECP shall carry the same ECP number as the written message and shall include reference to:
 - Method and date of the original communication.
 - b. Individuals contacted.
 - c. Source of resultant contractual direction, if any.
- 5.4.2.3.5 Format for Class I engineering changes. Contractor format is acceptable for proposing Class I engineering changes, as long as the ECP contents are presented in Block Number sequence as presented in Appendix D. The following paragraphs, and Table I, prescribe the contents by Block Number that are required to fully document the impact of the engineering change. (See 4.3.2 and 6.3)

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Table I. Appendix D Information Block Number Content Requirements for an ECP.

REQUIRED CONTENTS		LIFE CYCLE PHASES			
INFORMATION BLOCK NUMBERS	USAGE	Concept Exploration and Definition	Demonstration and Validation	Engineering and Manufacturing Development	Production and Deployment Operations and Support
I through 27	Cover Sheet	REQUIRED Only when functional characteristics are to be controlled	REQUIRED Cover short summarium the ECP	REQUIRED Cover these summarums the ECP	REQUIRED Cover sheet measurements the ECP
28 through 36	Effects on Functional Allocated Configuration Identification	NOT REQUIRED	REQUIRED USED to: Describe proposal changes in functional configuration identification	REQUINED USED to. Describe Proposed changes in functional or allocated configuration identification at defined by system and appropriate item specification.	REQUIRED in (A) System specification change is associated with design change (b) Two part specification mothed used and Part 1 specification meads to be changed (c) Development and production fabrication specification used and development specification occurs to be changed
37 through 50	Effects on Product Configuration Identification Operations and Logistic	NOT REQUERED	not required	REQUIRED when: Prototypes are undergoing operational and service testing USED to: Provide an index to impacts of the change	REQUELED USED to:- Describe offers of change in product configuration identification changes in parts or assumbles & impact on logistic classess.
51	Estimated Net Total Cost Impact (one item)	not required	not required	REQUIRED when: (a) BCP requires change to contract cast (b) Future production cast is a consideration in evaluating desirability of effecting the proposed change.	REQUIRED USED to: Tabulate cost impact
52	Estimated Cost/Sevings Summary Related FCPs	NOT REQUIRED	NOT REQUIRED	REQUIRED If: (a) There are related BCPs applying to two or stores items (b) New trainers or instea of support equipment are required USED to: Submertan cost impact of all related BCPs	REQUERED if: (a) There are related ECPs applying to two or more issues. (b) Now minors or instea of support equipment are required. USED to: Summarism out impact of all related ECPs
54	Milestone Chart	NOT REQUIRED	NOT REQUIRED	REQUIRED if: There is a schedule change in more than delivery date for item USED to Show inter-relationships in schedules	REQUIRED II: There is a schedule change in more than delivery date for item. USED to: Show inter-relationship in schedules
60	Milesione Chart	NOT REQUIRED	NOT REQUIRED	REQUIRED if There is a schedule change in more than delivery date for a software intensive only item	REQUIRED if' Show inter-relationship in software intensive only schedules

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(Originator name, address, date and standard message transmittal information not shown below)

CAG	E Code Government Contract No					
ECP	Number					
1.	Urgent (or emergency) priority engineering change affecting					
	(Show contract item nomenclature, part number or type designation.)					
	Is required because(State reason for action and reference applicable documents.)					
2.	Action required to correct the condition (s) noted by the urgent (or emergency condition is:					
	(This paragraph shall provide a description of the proposed engineering change.)					
3.	The ECP shall be accomplished on serial numbers against contracts:					
	(Show breakout by contract number.)					
4.	The following support equipment must be modified (or new support equipment must be delivered) concurrently with this change:					
	(If there is no effect on support equipment, include a statement to that effect.)					
5.	Interim support to be provided: (address applicable areas)					
	a. Spares b. Technical Manuals c. Training d. Software e. Other					
6.	Additional information may be included when available. However, reporting and initiating action to correct urgent or emergency conditions shall not be delayed pending the availability of additional information.					
7.	Point of contact for this change is					
	Figure 2 Sample Engineering Change Proposal Message Form					

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5.4.2.3.5.1 Class I engineering changes - functional baseline. Class I engineering changes submitted after establishment of the functional baseline, and prior to the establishment of either the allocated or product baselines, shall conform to the following requirements: Blocks 1 through 27, (See Appendix D) shall be used summarize the engineering change. Blocks 28 through 36, (See Appendix D) shall be used to describe proposed changes in the mission, performance, and other requirements of the specification.

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- 5.4.2.3.5.2 <u>Class I engineering changes allocated</u>
 <u>baseline</u>. Class I engineering changes submitted after
 establishment of the functional and allocated baselines, and
 prior to the establishment of the product baseline, shall conform
 to the following requirements:
 - a. Blocks 1 through 27 shall be used to summarize the engineering change.
 - b. Blocks 28 through 36 shall be used to describe changes from the FCD or ACD defined by the system specification and each pertinent item specification. As required, the detailed text of proposed changes in each of these specifications is furnished as enclosures, but the Block-required information shall be furnished to summarize significant effects on specifications.
 - c. If prototypes of items are undergoing operational evaluation or service tests, changes in the hardware or software of such existent or subsequent prototype models shall be described as required for Blocks 37 through 50, (See Appendix D).
 - d. Blocks 51, 52, 56 and 60 shall be used as prescribed in 5.4.2.3.5.3, when applicable. (See Appendix D)
- 5.4.2.3.5.3 Class I engineering changes product baseline. Class I engineering changes submitted after establishment of the product baseline shall conform to the following requirements:
 - a. Blocks 1 through 27 shall be used to summarize the engineering change.
- # b. Blocks 28 through 36 may be required. If changes are proposed to the current approved FCD or ACD, this information must be submitted.

- c. Blocks 37 through 50, with applicable enclosures, shall be used to identify the effects of the proposed change to the PCD, logistics and operations. Retrofit information shall be included in Blocks 40 through 47.
- d. Block 51 (See Appendix D) shall be used to tabulate the net life cycle cost impact of the individual ECP. Entries under "other costs/savings" to the Government need be made only to the extent estimated costs/savings data are available to the contractor.
- e. Block 52 (See Appendix D) is applicable either when there are related ECPs as described by 5.4.2.3.6.1 and 5.4.2.3.6.3 or when new trainers or support equipment will be required as a result of the ECP. The net total life cycle cost impacts (increase or decrease) of the individual related ECPs shall be summarized together with all related ILS costs which have not been included in the individual ECPs. Entries regarding related ECPs of other prime contractors shall be made by integrating contractors; otherwise, such entries need be made by a prime contractor only to the extent such data are available to the prime.
- f. Block 56 and/or 60 (See Appendix D) is required if there is a revision in the schedule actions other than delivery of the item which is the subject of the ECP.

 Block 56 and/or 60 is not required if the revision in the schedule can be fully described either in Block 19 or by reference therein to a revised schedule for the subject item. When required, Block 56 and/or 60 shall be used as a graphic presentation of the time phasing of major actions involved in all related engineering changes to hardware, software and associated updating of documentation.

5.4.2.3.6 Related engineering changes.

5.4.2.3.6.1 Related engineering changes - single prime. A desired engineering change in one item (the basic engineering change) may require related engineering changes in other items in order to retain (or attain) either an interface match or compatibility and interoperability of associated items. When such an engineering change is proposed and when the basic item and other items affected by related engineering changes are the

responsibility of a single prime contractor, the ECP package shall include both the basic and all such related engineering changes.

- 5.4.2.3.6.2 Related engineering changes single prime multiple procuring activities. The basic ECP number shall be assigned to the ECP applicable to the item which is the immediate objective of the desired ECP. Related ECPs submitted to the Government shall be identified by the basic number plus a separate dash number for each procurement activity.
- 5.4.2.3.6.3 Related engineering changes separate primes. a desired engineering change in one item (the basic engineering change) requires related engineering changes in other items which are the responsibility of other prime contractors who are participating in a specific item development or production program, the basic ECP and its impact on other items shall be coordinated by the originating contractor as required prior to submission to the Government. Coordinating contractors are not required to provide cost and pricing data to other contractors. The technical basis for the change and technical effects of the change shall be coordinated. The coordinated basic ECP shall include data showing the extent of coordination and its results, when applicable and available, to the related ECPs of the other prime contractors. Likewise, the basic and each related ECP, when submitted by its separate prime, shall cross-reference the basic and other related ECPs.
- 5.4.2.3.6.4 <u>Same engineering change prime/subcontractor</u> <u>coordination</u>. When the contractor, as the prime contractor to the Government for an item, is also a subcontractor to another prime contractor(s) for that same item, initiates an ECP on that item, he shall coordinate the ECP with the other prime contractor(s) prior to submission. The ECP shall include data on the extent and results of such coordination.
- 5.4.2.3.6.5 <u>Same engineering change several contractors</u>. Unless otherwise specified, when the Government has contracts with two or more prime contractors for the same item, the Government will conduct such coordination of ECPs as it deems necessary.
- 5.4.2.4 <u>Class II engineering changes</u>. An engineering change which impacts none of the Class I factors specified in 5.4.2.2.1 shall be classified as a Class II engineering change.
- 5.4.2.4.1 Class II engineering change format. Contractor format for Class II engineering changes is acceptable. Class II engineering changes requiring Government approval shall contain the information required for Blocks 1 through 27 of Appendix D.

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- # Class II engineering changes requiring Government concurrence in
 # classification only shall include, as a minimum:
 # (See 4.3.2 and 6.3)
 - a. Name and part number of item affected.
 - b. Name and part number of next higher assembly.
 - c. Description of the engineering change.
 - d. Reason for making the engineering change.
 - e. All Government contract number(s) against which the change will be submitted.
 - f. Change document number.

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- 5.4.2.4.2 <u>Class II justification codes</u>. The justification codes for Class I engineering changes need not be applied to a Class II engineering change.
- 5.4.2.4.3 Concurrence in Class II changes. Unless otherwise specified by the Government, or unless 5.4.2.4.4 or 5.4.2.4.5 applies, Government review of Class II changes during production will consist of a technical evaluation of the change and of material substitutions to support concurrence in classification recommendations. The contractor shall obtain Government concurrence prior to or concurrent with the release of the Class II change. The contractor assumes total risk for implementation of changes prior to notification of Government concurrence.
- 5.4.2.4.4 <u>Approval of Class II changes</u>. When the Government has required by contract that it approve each Class II change, the contractor shall not implement the change until approved by the Government.
- 5.4.2.4.5 Non-custody of the original drawings. When the contractor or his subcontractors do not have custody of the original drawings delineating the detail design, and when compliance with such drawings is a contract requirement, each Class II engineering change is subject to approval by the Government prior to implementation as specified in the contract.
- 5.4.3 Requirements for Requests for Deviation (RFD). The contractor shall not manufacture items for acceptance by the Government that incorporate a known departure from requirements, unless a request for a deviation has been approved in accordance

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with the requirements of this standard. Authorized deviations are a temporary departure from requirements and do not constitute a change to the FCD, ACD, or PCD. Prior to manufacture of an item, if a contractor considers it necessary to temporarily depart from the requirements, the contractor may request a deviation. Deviations do not apply to software code listings. Where it is determined that a change should be permanent, a Class I or Class II engineering change must be processed in accordance with this standard.

- 5.4.3.1 Restrictions on deviations. Unless unusual circumstances exist, critical deviations and deviations which would affect service operation, logistic interoperability, or maintenance (e.g., repair parts, operation or maintenance procedures, or compatibility with trainers or test sets) shall not be requested. The effectivity of the request for deviation normally should not include the entire remaining number of deliverable units on the contract; if that is the case, an engineering change should be submitted.
- 5.4.3.2 <u>Recurring deviations</u>. Submittal of recurring deviations is discouraged and shall be minimized. If a proposed deviation is recurring (a repetition or extension of a previously approved deviation), it is probable that either the requirements of the documentation are too stringent or the corrective action of the manufacturer was ineffective. If it is necessary for a contractor to request a deviation for the same situation with the same item more than two times, then the need for an engineering change, rather than deviation, shall be addressed between the Government and the contractor.
- 5.4.3.3 <u>Classification of deviations</u>. Each request for deviation shall be designated as critical, major, or minor by the originator in accordance with this standard. Classification disagreements shall be referred to the Government for decision.
 - 5.4.3.3.1 Minor. A deviation shall be designated as minor when:
 - a. The deviation consists of a departure which does not involve any of the factors listed in 5.4.3.3.3 or 5.4.3.3.2 or
 - b. When the configuration documentation defining the requirements for the item classifies defects in requirements and the deviations consist of a departure from a requirement classified as minor.

- 5.4.3.3.2 Major. A deviation shall be designated as major when:
- a. The deviation consists of a departure involving: (1) health; (2) performance; (3) interchangeability, reliability, survivability, maintainability, or durability of the item or its repair parts; (4) effective use or operation; (5) weight; or (6) appearance (when a factor) or
- b. When the configuration documentation defining the requirements for the item classifies defects in requirements and the deviations consist of a departure from a requirement classified as major.
- 5.4.3.3.3 <u>Critical</u>. A deviation shall be designated as critical when:
 - a. The deviation consists of a departure involving safety or
 - b. When the configuration documentation defining the requirements for the item classifies defects in requirements and the deviations consist of a departure from a requirement classified as critical.
- 5.4.3.4 <u>Format</u>. Contractor format for the Request for Deviation (RFD) is acceptable. Each RFD shall contain all information required by Appendix E presented in Block Number sequence. (See 4.3.2 and 6.3)
- 5.4.3.5 <u>Disposition of deviations</u>. Unless otherwise specified in the contract, requests for critical or major deviations should be approved or disapproved within 30 calendar days of receipt by the Government, and minor deviations should be approved or disapproved within 15 calendar days of receipt by the Government.
- 5.4.3.5.1 <u>Minor deviations</u>. Unless otherwise specified by the Government, minor deviations shall be authorized (or disapproved) for the Government by the activity authorized to approve or concur in classification of Class II changes.

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- 5.4.3.5.2 <u>Critical and major deviations</u>. Critical and major deviations shall be approved in accordance with the terms of the contract.
- 5.4.4 Requirements for Requests for Waiver (RFW). The contractor shall not offer, for acceptance by the Government, items that incorporate a known departure from requirements, unless a request for waiver has been approved in accordance with this standard. Authorized waivers apply to a specific quantity of manufactured items and do not constitute change to the FCD, ACD, or PCD. The contractor may process a request for waiver if, during or after manufacture of an item which incorporates a known departure from requirements, it is determined that the item is considered suitable for use "as is" or after repair by an approved method. Waivers do not apply to software code listings. Where it is determined that a change should be permanent, a Class I or Class II engineering change must be processed in accordance with this standard.
- 5.4.4.1 Restrictions on waivers. Unless unusual circumstances exist, critical waivers and waivers which would affect service operation, logistic interoperability, or maintenance (e.g., repair parts, operation or maintenance procedures, or compatibility with trainers or test sets) shall not be requested. The effectivity of the request for waiver normally should not include the entire remaining number of deliverable units on the contract; if that is the case, an engineering change should be submitted.
- 5.4.4.2 Recurring waivers. Submittal of recurring waivers is discouraged and shall be minimized. If a proposed waiver is recurring (a repetition or extension of a previously approved waiver), it is probable that either the requirements of the documentation are too stringent or the corrective action of the manufacturer was ineffective. If it is necessary for a contractor to request a waiver for the same situation with the same item more than two times (or for the remainder of the contracted quantity of deliverable units), then the need for an engineering change, rather than a waiver, shall be addressed between the Government and the contractor.
- 5.4.4.3 <u>Classification of waivers</u>. Each request for waiver shall be designated as critical, major, or minor by the originator in accordance with this standard. Classification disagreements shall be referred to the Government for decision.

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- 5.4.4.3.1 Minor. A waiver shall be designated as minor when:
- a. The waiver consists of acceptance of an item having a nonconformance with contract or configuration documentation which does not involve any of the factors listed in 5.4.4.3.3 or 5.4.4.3.2.
- b. When the configuration documentation defining the requirements for the item classifies defects in requirements and the waivers consist of a departure from a requirement classified as minor.
- 5.4.4.3.2 Major. A waiver shall be designated as major when:
- a. The waiver consists of acceptance of an item having a nonconformance with contract or configuration documentation requirements involving: (1) health; (2) performance; (3) interchangeability, reliability, survivability, or maintainability of the item or its repair parts; (4) effective use or operation; (5) weight; or (6) appearance (when a factor).
- b. When the configuration documentation defining the requirements for the item classifies defects in requirements and the waivers consist of a departure from a requirement classified as major.
- 5.4.4.3.3 <u>Critical</u>. A waiver shall be designated as critical when:
 - a. The waiver consists of acceptance of an item having a nonconformance with contract or configuration documentation involving safety; or
 - b. When the configuration documentation defining the requirements for the item classifies defects in requirements and the waivers consist of a departure from a requirement classified as critical.
- 5.4.4.4 <u>Format</u>. Contractor format for the Request for Waiver (RFW) is acceptable. Each RFW shall contain all information required by Appendix E presented in Block Number sequence. (See 4.3.2 and 6.3)

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- 5.4.4.5 <u>Disposition of waivers</u>. Unless otherwise specified in the contract, requests for critical or major waivers should be approved or disapproved within 30 calendar days of receipt by the Government, and minor waivers should be approved or disapproved within fifteen calendar days of receipt by the Government.
- 5.4.4.5.1 <u>Minor waivers</u>. Unless otherwise specified by the Government, minor waivers shall be dispositioned by the local Material Review Board (MRB) when such a board is properly constituted, or in the absence of such MRB by the Contract Administration Office (CAO).
- 5.4.4.5.2 <u>Critical and major waivers</u>. Critical and major waivers shall be approved in accordance with the terms of the contract.
- 5.4.5 Parts substitutions. Unless otherwise specified by contract, part substitution for parts identified in the current approved configuration documentation of an item from the product baseline through the remainder of the item's life cycle shall conform as follows:
 - a. Substitution of a non-repairable part for an item for which the contractor has configuration documentation custody shan not require a Class I or Class II engineering change or a request for deviation or waiver when:
 - (1) The part is identified as an authorized substitute or superseding part in a military specification or standard; and
 - (2) The part will not be installed in equipment to be submitted for verification and reliability demonstration tests.
 - b. Substitution of a non-repairable part shall require a Class II engineering change when:
 - (1) The part substituted is determined, by the contractor having configuration documentation custody over the item, to be a preferred part over the original; or

- (2) The contractor does not have configuration documentation custody.
- c. Part substitutions which do not meet the requirements of 5.4.5a or 5.4.5b and for which a permanent change is not desired shall require submission of a Request for Deviation (RFD) or Request for Waiver (RFW).
- d. All other parts substitutions shall be subject to the Class I or Class II engineering change as applicable.
- In 5.4.6 Requirements for Specification Change Notices (SCNs). accordance with the requirements of the contract, the contractor shall, concurrent with the preparation of an ECP, prepare a separate proposed "Specification Change Notice", in accordance with Appendix F, for each specification which would require revision if the ECP were approved. The SCN(s) shall be submitted to the Government with the ECP for approval and authorization, or disapproval. In the situation discussed in paragraph 5.4.2.3.6.3 (Related engineering changes - separate primes), the originating contractor shall prepare and coordinate the SCN(s) with other prime contractors along with the ECP. Errors of a minor nature (such as typographical errors, punctuation, etc.) shall not be corrected, except as an incidental part of the next technically required ECP and accompanying proposed SCN affecting that CI specification. (See 4.3.2 and 6.3)
- 5.4.6.1 SCN cover page. The information required by Appendix F shall precede the specification change pages. SCNs for a specification are sequentially numbered beginning with SCN 1; SCNs for a newly revised specification are also sequentially numbered starting again with SCN 1. The SCN number shall be placed on the cover sheet of the SCN submittal package. The proposed SCN, or any revisions thereto, and the approved SCN shall carry the same number. Once an SCN has been submitted to the Government along with an ECP, its SCN sequence number related to that revision of the specification shall not thereafter be changed or assigned to another ECP/SCN package. (SCN numbers associated with disapproved ECPs are not reused.) However, due to differing change processing/approval time periods, SCNs may be approved by the Government out of sequence. If this occurs, the SCN shall be changed to reflect the other SCNs approved since it was proposed; likewise, some of the attached change pages might have to be revised to reflect the current wording as of the approval date.

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- 5.4.6.2 <u>Attachments to proposed SCN</u>. The attachments to the proposed SCN shall be:
 - a. Pages containing detailed information about the exact proposed changes to the specification by reference to the paragraph, page, Figure, or Table and by citing the words/information to be changed in "From/To" format; or
 - b. Replacement new specification pages in format suitable to be substituted for existing pages, identified with the specification number and SCN approval date, numbered with the same numbers of the pages they replace plus a suffix letter where additional pages are needed to replace a page (e.g., new Pages 5 and 5a replace old Page 5), and all portions affected indicated by symbols (e.g., change bars, asterisks etc.) in the margin; or
 - c. A proposed specification revision, where more practical, identified with the same number as the specification to be superseded with a new revision letter, prepared to the same format, and all portions affected identified with symbols in the margin or containing a note explaining that the changes are too extensive to be identified.
- 5.4.6.3 <u>Supersession</u>. When a proposed SCN must be revised and resubmitted, the resubmitted SCN shall retain the same basic SCN number but must be reidentified as a superseding revision (starting with R1 for each SCN) to avoid confusion with any previous submittals of the SCN.
- 5.4.6.4 Approved SCN. The contractor will receive approved SCNs from the Government concurrent with contractual authorization, and shall use the approved SCNs as authorization to update the specifications in accordance with the approved SCNs. An approved SCN also provides a summary listing of pages affected by all previously approved changes to that particular revision of the specification. SCNs are not cumulative insofar as transmittal of change pages from previous change is concerned, and changes distributed with previous SCNs remain in effect unless changed or canceled by an SCN of later issue. However, the summary of current changes shall be a cumulative summary as of the date of approval of the latest SCN.
- 5.4.6.5 <u>Changed pages</u>. Updated and reissued pages shall be complete reprints of pages suitable for incorporation by removal of old pages and insertion of new pages. All portions affected by the change shall be indicated by a symbol in the margin

adjacent to the change and encompassing all changed portions. When changed pages are issued for specifications with pages printed on both sides of a sheet, and only the page on one side of a sheet is affected by the change, both sides of the sheet shall be reissued. The unchanged side shall be reprinted without change and shall not carry the date of the change or be included in the change summary as being affected by the change.

5.4.7 Requirements for Notices of Revision (NORs). The "Notice of Revision", (See Appendix G) shall be utilized to describe the exact change(s) to be made to each drawing, associated list, or other affected document when specified as a data requirement in the contract. NOR's shall be prepared in contractor format containing the information required in Appendix G in Block Number sequence. (NORs are normally applicable where documents affected by the ECP are not controlled by the ECP preparing activity.) (See 4.3.2 and 6.3)

5.4.8 Configuration control (short form procedure).

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- 5.4.8.1 <u>Purpose</u>. The purpose of the short form procedure is for use with items for which the prescribed detail design was not developed by the contractor and for which the contractor can not be expected to know the total impact of a proposed change. The Government will normally be responsible for determination of possible effects of engineering changes on higher level or associated items and similarly for impact of deviations and waivers. It may also be applied to privately developed items (e.g., commercial off-the-shelf items), when the contracting activity has determined that the application of change control to such items is necessary. The short form procedure will only be applicable when specifically required by the contract.
- 5.4.8.2 Requirements for ECPs. When a permanent change is desired, to the configuration documentation prescribed by the contract, an ECP is required. Contractual authorization shall be required prior to implementation of an ECP which affects contract cost, fee, schedule or technical requirements specified either in the contract or in the configuration documentation prescribed directly by its identifying number in the contract.
- 5.4.8.2.1 <u>ECP format</u>. Contractor format is acceptable for short form engineering change proposals. The short form engineering change proposal shall contain the information required by Appendix D in Block Number sequence.

 (See 4.3.2 and 6.3)

- 5.4.8.2.2 Expediting ECPs. An ECP which, in the contractor's judgement, requires immediate action, may be initiated by telephone, message, personal contact, or electronic transmittal to be followed by the contractor's written statement within three (3) work days. If the initial reaction by the addressee of the communication is favorable, a written ECP in accordance with this standard shall be submitted as soon as practicable, but not later than 30 calendar days after the first communication.
- 5.4.8.2.3 <u>Revisions</u>. An ECP shall be revised when major alterations or changes to the initial ECP are necessary in accordance with 5.4.2.2.3.2 of this standard.
- 5.4.8.2.4 <u>ECP coverage</u>. Unrelated engineering changes shall not be covered by the same ECP; rather, a separate ECP shall be prepared for each engineering change.
- 5.4.8.2.5 <u>ECP supporting data</u>. ECPs shall be supported by marked copies of drawings, other technical documentation or parts thereof and the information, as required to justify and describe the change. ECPs originated by subcontractors may be included as supporting data.
 - 5.4.8.2.6 ECP approval. Approval of an ECP will be achieved by:
 - a. The signature on the ECP of the contracting activity or a review activity specifically identified in the contract and by the return of an approved copy to the contractor; or
 - b. Modification when the ECP affects the contract.
- 5.4.8.2.7 <u>Disapproval</u>. When an ECP is disapproved, the Government will notify the contractor of such disapproval in writing within 30 calendar days of the disapproval date giving the reason(s) for disapproval.
- 5.4.8.3 Requirements for deviations. Prior to manufacture of an item, if a contractor considers it necessary to temporarily depart from the mandatory requirements of the specification or drawings, the contractor may request that a deviation be authorized. As an example, a deviation relating to an alternative material, process, functional, or dimensional requirement may be requested. Items shall not be delivered incorporating a known departure from documentation unless a request for deviation has been approved in accordance with the requirements of this standard, or unless otherwise contractually

authorized. For parts substitutions which do not require requests for deviations see 5.4.5. Authorized deviations are a temporary departure from requirements and do not constitute a change to the ACD, FCD, or PCD. Where it is determined that a change should be permanent, an ECP must be processed in accordance with 5.4.2.

- 5.4.8.3.1 <u>Restrictions on deviations</u>. Unless unusual circumstances exist, requests for deviations affecting safety shall not be submitted. Requests for deviations which would affect service operation or maintenance should not be submitted or authorized as deviations. Such changes that will affect specifications, drawings or technical manuals shall be proposed and processed as ECPs.
- 5.4.8.3.2 Recurring deviations. Submittal of recurring deviations is discouraged and shall be minimized. If a proposed deviation is recurring (a repetition or extension of a previously approved deviation), it is probable that either the requirements of the documentation are too stringent or the corrective action of the manufacturer was ineffective. If it is necessary for a contractor to request a deviation for the same situation with the same item more than two times, then the need for an engineering change, rather than a deviation, shall be addressed between the Government and the contractor.
- 5.4.8.3.3 <u>Deviation format</u>. Contractor format for the short form Request for Deviation (RFD) is acceptable. The short form RFD shall contain all information required by Appendix E presented in Block Number Sequence. (See 4.3.2 and 6.3)
- 5.4.8.3.4 <u>Classification of deviations</u>. RFDs will be classified as critical, major, or minor, in accordance with the criteria of 5.4.3.3, by the Government's representative identified in the contract.
- 5.4.8.3.5 <u>Disposition of deviations</u>. RFDs will be dispositioned by the Government. [Contracts will include the RFD submittal instructions, classification authority, approval authority, and turn-around-time for notification of approval/disapproval. When there are differing disposition requirements for critical, major, and minor RFDs, the contract will so specify.]

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- 5.4.8.4 Requirements for waivers. Supplies or services which control conform in all respects to the contract requirements normally are rejected. An item which through error during manufacture does not conform to the specified configuration documentation shall not be delivered to the Government unless a waiver has been processed and granted in accordance with this standard.
- 5.4.8.4.1 <u>Restrictions on waivers</u>. Unless unusual circumstances exist, requests for waivers affecting safety will not be authorized. ECPs shall be used for such deficiencies.
- 5.4.8.4.2 Recurring waivers. Submittal of recurring waivers is discouraged and shall be minimized. If a proposed waiver is recurring (a repetition or extension of a previously approved waiver), it is probable that either the requirements of the documentation are too stringent or the corrective action of the manufacturer was ineffective. If it is necessary for a contractor to request a waiver for the same situation with the same item more than two times (or for the remainder of the contracted quantity of deliverable units), then the need for an engineering change, rather than a waiver, shall be addressed between the Government and the contractor.
- 5.4.8.4.3 <u>Waiver format</u>. Contractor format for the short form Request for Waiver (RFW) is acceptable. The short form RFW shall contain all information required by Appendix E presented in Block Number sequence. (See 4.3.2 and 6.3)
- 5.4.8.4.4 <u>Classification of waivers</u>. RFWs will be classified as critical, major, or minor, in accordance with the criteria of 5.4.4.3, by the Government's representative identified in the contract.
- 5.4.8.4.5 <u>Disposition of waivers</u>. RFWs will be dispositioned by the Government. [Contracts will include the RFW submittal instructions, classification authority, approval authority, and turn-around-time for notification of approval/disapproval. When there are differing disposition requirements for critical, major, and minor RFWs, the contract will so specify.]

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5.5 Configuration Status Accounting (CSA).

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- 5.5.1 <u>Purpose of CSA</u>. The purpose of CSA is to assure accurate identification of each CI and delivered unit so that the necessary logistics support elements can be correctly programmed and made available in time to support the CI. An adequate and accurate CSA will enhance program and functional manager's capabilities to identify, produce, inspect, deliver, operate, maintain, repair, refurbish, etc., CIs in a timely, efficient, and economical manner in satisfying their assigned responsibilities.
- 5.5.2 <u>CSA requirements</u>. The contractor's information system shall be capable of meeting contractual requirements for CSA. Appendix H, as tailored in the contract, establishes requirements for CSA of the documentation and identification numbers which describe CIs, the processing and implementation of changes to CIs and their associated documentation, and the actual configuration of units of CIs. (See 6.3)
- 5.5.3 <u>Preferred information system</u>. The contractor shall provide CSA information from the contractor's information system to the maximum extent possible. Where information beyond the existing contractor system is required by the Government to be included in the data base or in the formatted output, such additional information shall be provided as supplements to the existing system without disrupting the existing system or requiring the generation of a completely new system for the Government.
- 5.5.4 Retention of historical data base. The contractor shall retain a complete historical record of all the information required by the Government to be stored in the system. Such historical information shall be formatted and maintained in such a manner that it can readily be copied, in total or by specific elements identified by the Government, for transfer in a format specified in the contract.
- 5.5.5 <u>CSA data elements</u>. The contractor shall utilize the data elements identified and defined in Appendix I as a guide in the preparation of all applicable CSA records and reports. (See 6.3)

- 5.5.6 <u>Contractor focal point</u>. The contractor shall identify a focal point for the CSA system to interface with the data base users.
- 5.5.7 <u>CSA analysis requirements</u>. The contractor shall review and analyze CSA data. When potential or actual problems/ delinquencies which impact the Government are detected, the contractor shall contact the Government within one business day to establish a course of action to rectify the situation. In addition:
 - a. Analysis shall be performed to detect trends in the problems reported.
 - b. Corrective actions shall be evaluated to: (1) verify that problems have been resolved, adverse trends have been reversed, and changes have been correctly implemented in the appropriate processes and products, and (2) to determine whether additional problems have been introduced.
- 5.5.8 Reporting accomplishment of retrofit changes. When units already accepted by the Government are returned to the contractor, either for prolonged use or for specific retrofit action, the contractor shall document the incorporation of all retrofit changes to those units in his custody and shall report the status of those units. Appendix J delineates the detailed procedures for reporting accomplishment of retrofit changes by the contractor. These procedures shall be used to report accomplishment, in accordance with retrofit instructions, at the contractor's home plant, at other contractor-operated activities, and at Government operated activities, as directed by the Government. (See 6.3)
- 5.6 <u>Configuration audits</u>. FCA and PCAs will normally be conducted by the Government prior to acceptance of a CI and prior to establishing the PBL.
- 5.6.1 <u>Contractor participation and responsibilities</u>. The contractor shall be responsible for supporting Government conducted configuration audits in accordance with the following requirements except as amended by the contract.
- 5.6.1.1 <u>Subcontractors and suppliers</u>. The contractor shall be responsible for insuring that subcontractors, vendors, and suppliers participate in Government configuration audits, as appropriate.

- (7) The drawings (and/or CAD presentations) of a major assembly/black box of the HWCI shall be checked for continuity from top drawing down to piece-part drawing.
- (8) Insure that approvals by the Government are present where required.
- d. The Program Parts Selection List (PPSL) shall be compared to the HWCI/engineering drawing package to ensure only approved parts are listed. (See 6.6)
- e. Review of all records of baseline configuration for the CI by direct comparison with the contractor's engineering release system and change control procedures to verify that the configuration being produced accurately reflects released engineering data. This includes interim releases of spares/repair parts provisioned prior to PCA to ensure delivery of currently configured spares/repair parts.
- f. Audit the software library, or similar internal support activity, to assure that it accurately identifies, controls, and tracks changes to the software and documentation. Audit the contractor's engineering release and change control system against the requirements in Appendix B to ascertain that the system is adequate to properly control the processing and formal release of engineering changes. The contractor's system shall meet the information and capabilities requirements of Appendix B as a minimum. The contractor's formats, systems, and procedures will be used.
- g. CI acceptance test data and procedures shall comply with product specifications. The PCA team shall determine any acceptance tests to be reaccomplished, and reserves the right to have representatives of the Government witness all or any portion of the required audits, inspections, or tests.
- h. CIs which fail to pass acceptance testing shall be repaired if necessary and shall be retested by the contractor either in the manner specified by the PCA team leader or in accordance with procedures in the product specification.

- i. Present data confirming the inspection and test of subcontractor equipment end items at point of manufacture Inspection and tests shall have been witnessed by Government representative.
- j. The PCA team shall review the prepared back-up data (all initial documentation which accompanies the CI) for correct types and quantities to ensure adequate coverage at the time of shipment to the user.
- k. CIs which have demonstrated compliance with the product specification will be approved for acceptance. The Peters shall certify by signature that the CI has been built in accordance with the drawings and specifications.
- 1. As a minimum, the following actions shall be performed the PCA team on each CSCI being audited:
 - (1) Review all documents which will comprise the product specification for format and completeness.
 - (2) Review FCA minutes for recorded discrepancies as actions taken.
 - (3) Review the design descriptions for proper entries symbols, labels, tags, references, and descriptions.
 - (4) Compare detailed design descriptions with the softward listings for accuracy and completeness.
 - (5) Examine actual CSCI delivery media (disks, tape: etc.) to ensure conformance with Section 5 of the software requirements specifications.
 - (6) Review the annotated listings for compliance wire approved coding standards.
 - (7) Review all required operation and support documen for completeness, correctness, incorporation comments made at Test Readiness Review (TRR), a adequacy to operate and support the CSCI(s). (Form verification or acceptance of these manuals should withheld until system testing to ensure that the procedural contents are correct.)

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use.

- 6.2 Tailoring quidance for contractual application. The requirements of this standard must be tailored for application to programs involving items of various levels of complexity in various phases of their life cycle. Table II is provided to help you decide which requirements from sections 4 and 5 should be invoked in your contract. Table III is provided to help you decide which status accounting tasks, from Appendix H, should be invoked in your contract. These tables list numbered paragraphs and subparagraphs only. Lettered subparagraphs are considered an integral part of the numbered paragraph or subparagraph to which they are attached, and they are invoked with the numbered paragraph or subparagraph automatically, unless specifically stated otherwise in the tasking statement in the Statement of Work. Where the subparagraphs listed in the tables are normally invoked as a unit by citing the lead paragraph, the subparagraphs are listed, but no tailoring guidance is provided for the individual subparagraphs; when certain subparagraphs will need to be tailored out, or when they may be separately tailored into, the contract, separate tailoring guidance is provided for those specific subparagraphs.
- 6.2.1 <u>Use of Table II</u>. The columns are arranged to identify the normal application in the Demonstration and Validation (D/V), the Engineering and Manufacturing Development (EMD), the Production and Deployment (PRD), and the Operation and Support (OPS) phases of the life cycle. The SMPL (sample wording) column provides a recommendation on which of the sample tasking wording to use (by reference to samples A, B, or C in 6.2.1.2) and, if applicable, to the blank spaces (e.g., [1] or [2]) in the sample. The NOTE column contains a "pointer" to a specific Note (see 6.2.1.3) that will provide further guidance in tailoring the requirement.
- 6.2.1.1 <u>Explanation of codes</u>. A number of codes are used in Table II to indicate the applicability of a specific requirement to a specific phase of the program. The following codes are used:
 - a. N/A This code is used to designate "title-only" paragraphs that would not normally be invoked to incorporate all subparagraphs into the contract.

Table II Tailoring guide for use with MIL-STD-973

PARA #	PARAGRAPH TITLE	D/V	ENG D	PRD	<u>ops</u>	NOTE	SMPL
4	GENERAL REQUIREMENTS	ALL	ALL	ALL.	ALL	a	B(1)
4.1	Basic Requirements	ALL	ALL	ALL	ALL		1
4.2	Planning	ALL	ALL	ALL	XII	j	1
4.3	Computer-aided acq and	ALL	ALL	ALL	ALL	ł	į
	logistics support (CALS)	j		1	ł	Į.	1
4.3.1	Data distribution/access	ALL	ALL	ALL	ALL	í	1
4.3.2	Electronic transfer of data	MOST	MOST	MOST	HOST	Ь	B(3)
4.3.3	Interactive access to	OPT	OPT	OPT	OPT	ь	B(3)
	digital data			ì	ì	1	i
4.4	Config identification	ALL	ALL	ALL	ALL.	j.	
4.5	Configuration control	ALL	ALL	ALL	ALL		i
4.6	Configuration status accts	ALL	ALL	ALL	ALL		1
4.7	Configuration audits	ALL	ALL	OPT	OPT	c	B(3)

5	DETAILED REQUIREMENTS	N/A	N/A	N/A	H/A		}
5.1	Purpose	N/A	N/A	N/A	N/A	 	
		N/A	N/A	H/A	1	ł	1
5.2	Config mgt administration	MOST	MOST	OPT	1	اها	ca
5.2.1	Contractor's CM Plan	MOST	MUST	UPI	l	ª	C(2)
	[Invokes APPENDIX A]		MOST		1	Į.	C(2)
5.2.2	Work breakdown structure	MOST	,	MOST	l	1	Ci
5.2.3	Technical reviews	ALL	ALL	100		 	CIII
			37.5	N/A	N/A	İ	1
5.3	Config identification	N/A	N/A	N/A	N/A	l .	
5.3.1	Purpose of config identif	ALL	ALL.		ł	ſ	C(1)
5.3.2	Configuration item selection	ALL	ALL	OPT		 	C(1)
	n	ALL	ALL	OPT	OPT	[_	B(1)
5.3.3	Developmental configuration			,	OPT	-	1 2 (1)
5.3.3.1	Documentation library	XLL	ALL	OPT		١	1
5.3.3.2	Drawing library	HOST	MOST	OPT	OPT	f	B(3)
5.3.3.3	Software Devel Library (SDL)	HOST	MOST	OPT	OPT	f	B(3)
5.3.4	Configuration Baselines	ALL	ALL	OPT	OPT		ca
5.3.4.1	Configuration Baselines	ALL	ALL	ALL	1 0		B(1)
5.3.4.1	documentation baseline/conity	1 *****	, ~	1	ſ	í	1 212
	Funct Config Documentation	ALL	ALL	OPT	l .	g	B(3)
5.3.4.1.1		PEN	ALL	OPT	1	1 2	B(3)
5.3.4.1.2	Alloc Config Documentation	NO	OPT	ALL		l "i	B(3)
5.3.4.1.3	Product Config Documentation		1	MOST	OPT	1:	B(3)
5.3.4.2	Maint of config documentation	MOST	MOST	1 7031	1 051	 	1 813/
\$.3.5	Egrg release and correlation	FEW	ALL	ALL	ALL	Į.	C(1)
3.3.5		,	1	,		1	1 ,
	of Manufactured products		1	1	1	1	C(2)
	[Invokes APPENDIX B]	ALL	ALL.	ALL	1	1	Cit
5.3.5.1	Specification release/appvl		OPT	OPT	OPT	l k	A(1)
5.3.5.2	Reqts for Engrg Rel Records	FEW	UPT	UPI	l ob,	^	1 ^\\\
5.3.5.2.1	Use of Engrg Rel Records	PEW	OPT	OPT	OPT		į.
	[Invokes APPENDIX C]	l		OPT	OPT		A(2)
5.3.5.2.2	Establish config baselines	PEW	OPT		,	1	1
5.3.5.2.3	Changes	PEM	OPT	OPT	TGO .	1	1
5.3.5.2.4	Consolidation of multiple	FEW	OPT	OPT	OPT	1	1
3.3.3.4.4	chqs into a single ERR	1	1	1	1	1	

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Table II. Tailoring guide for use with MIL-STD-973 - Continued

PARA #	PARAGRAPH TITLE	D/V	EMD	PRD	OPS	NOTE	SMPL
5.3.6	Configuration identifiers	ALL	ALL	ALL	1	1	B(1)
5.3.6.1	CAGE code	ALL	ALL	ALL	1	1	i
5.3.6.2	Govt type desig/nomenclature	ALL	ALL	ALL	1	1	ļ
5.3.6.3	Document numbers	ALL	ALL	ALL	l	1.	
5.3.6.4	Part/item identif numbers	MOST	MOST	MOST	1	f	B(3)
5.3.6.5	Software identifiers	MOST	MOST	MOST	ALL	I i	B(3)
5.3.6.6	Serial/lot numbers	PEW	OPT	OPT	OPT	n	B(3)
5.3.6.6.1	Government serial numbers	FEW	ALL	ALL	ALL		P(3)
5.3.6.6.2 5.3.6.7	Reuse of serial numbers Product identif/marking	PEW	HOST	MOST	\ \tag{1}	o, f	B(3)
5.3.6.7.1	Software marking/labeling	NO	MOST	MOST	1	J #	B(3)
5.3.6.7.2	Firmware labeling	NO	MOST	MOST		É	B(3)
5.3.6.7.3	NDI.COSTS, and PDI labeling	NO	OPT	OPT	OPT	li	B(3)
3.3.6.7.3	ADI, COSIS, and PDI labeling		1077	02.	1011	 	5(37
5.3.7	Interface management	N/A	N/A	N/A	1	[1
5.3.7.1	Interface requirements	ALL	ALL	OPT	j	p	C(1)
5.3.7.2	Rgts for an ICMG	PIEW	OPT	OPT	1	او	B(1)
5.3.7.2.1	ICMG membership	PEW	OPT	OPT	i	q	1
5.3.7.2.2	ICMG chairmanship	SLCT	SLCT	SLCT	ı	اه	B(3)
	•				<u> </u>		ļ
			1			[1
5.4	Configuration control	N/A	N/A	N/A	N/A	1	1 6/33
5.4.1	Purpose of config control	ALL_	ALL	ALL	ALL	 	C(1)
5.4.2	Regts for Engineering Changes	ALL	ALL	ALL.	ALL	 .	}
5.4.2.1	The engry change process	ALL	ALL	ALL	ALL	1	C(1)
			1				
5.4.2.2	Administrative requirements	ALL	ALL	ALL	ALL	i	B(1)
5.4.2.2.1	Classification of engrg chgs	ALL	ALL	ALL	ALL	1	1= .
5.4.2.2.2	Classifying engrg chg to PDI	FEW	OPT	OPT	OPT	r	B(3)
5.4.2.2.3	Content of ECPs {Invokes APPX D}	ALL	ALL	ALL	ALL		B(2)
5.4.2.2.3.1	Unrelated engrg changes	ALL	ALL	ALL	ALL		ŀ
5.4.2.2.3.2	Revisions of ECPs	ALL	ALL	ALL	ALL	af	B(3)
5.4.2.2.3.3	Supporting data	ALL	ALL	ALL	ALL	1	1
5.4.2.2.3.4	Classified data	ALL	ALL	ALL	ALL	1	l
5.4.2.3	Class I engrg chg proposals	ALL	ALL	ALL	ALL		B(1)
5.4.2.3.1	Class I ECP decisions	N/A	N/A	N/A	N/A	l	
5.4.2.3.1.1	Tgt for tech decis-Cls I ECP	ALL	ALL	ALL	ALL	ı	1
5.4.2.3.1.2	BCP authorization	ALL	ALL.	ALL	ALL	1 .	1
5.4.2.3.1.3	Cls I compat engrg chgs	ALL	ALL	ALL	ALL	1	1
5.4.2.3.1.4	Disapproval of BCPs	ALL .	ALL	ALL	ALL	1	
5.4.2.3.2	Class I ECP justif codes	ALL	ALL	ALL	ALL	1	1

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Table II. Tailoring guide for use with MIL-STD-973 - Continued

1	PARA #	PARAGRAPH TITLE	D/V	EMD	PRD	OPS	NOTE	SMPL
	5.4.2.3.3	Class I ECP types	ALL	ALL	ALL	ALL		
	5.4.2.3.3.1	Preliminary change proposal	ALL	ALL	ALL	ALL		
	5.4.2.3.3.1.1		ALL	ALL.	ALL	ALL	8	B(3)
	5.4.2.3.3.1.2		OPT	OPT	OPT	OPT	5	B(3)
	5.4.2.3.3.2	.4.2.3.3.2 Use of formal ECP (Type F)		ALL	ALL	ALL		
	1	A.Z.J.J.Z. ODE OF LOTIMES DOL (1) po 1)						
	5.4.2.3.4	Class I engre che priorities	ALL	ALL	ALL	ALL		
	5.4.2.3.4.1	Exped Cls I ECPs w/priority	ALL	ALL	ALL	ALL		
	1	of emergency or urgent		1		1		
	Į.		J	l l	i			
	5.4.2.3.5	Format for Cls I engrg chgs	ALL	ALL	ALL	ALL		
	5.4.2.3.5.1	Class I engrg changes-functional	ALL	NO	NO	NO		B(3)
-		court of anything of a more and a)	}	}	}		
			+	l .	ľ	1		
	5.4.2.3.5.2	Class I engrg changes-allocated	NO	ALL	140	NO		B(3)
	ĺ		1	ł	}	ł		
					l	l		2/21
	5.4.2.3.5.3	Class I engrg changes-prod baseline	NO	NO	NO	NO		B(3)
	1		ſ		İ	1	l	ľ
	5.4.2.3.6	Related engineering changes	ALL	ALL	ALL	ALL	l	
	5.4.2.3.6.1	Rel engre ches-single prime	NO	ALL	ALL	ALL	ļ.	B(3)
	5.4.2.3.6.2	Rel engre ches-single prime-	OPT	OPT	OPT	OPT	l t	B(3)
	3.4.2.3.4.2	multi procuring activities		1	1]	
	5.4.2.3.6.3	Rel egrg chgs-separte primes	OPT	OPT	OPT	OPT	l t	B(3)
	5.4.2.3.6.4	Same egrg chgs-pring/sub coord	OPT	OPT	OPT	OPT	١٠	B(3)
	5.4.2.3.6.5	Same egrg chg-sev contractors	OPT	OPT	OPT	OPT	l è	B(3)
	3.4.2.3.0.3	same egg eng ser concreteous	1	1	1	1] -]
	5.4.2.4	Class II engineering changes	i NO	PEW	ALL	ALL	น	B(30
	5.4.2.4.1	Class II engrg chg format	MO	PEH	ALL	ALL	1	1
	5.4.2.4.2	Class II justification codes	NO	PEN	ALL	ALL	l	j
	5.4.2.4.3	Concurrence in Class II chgs	NO	SLCT	SLCT	SLCT	և	B(3)
	5.4.2.4.4	Approval of Class II chgs	NO	SLCT	SLCT	SLCT	u	B(3)
	5.4.2.4.5	Non-custody of original dwgs -	MO	JRO .	OPT	OPT	٧	B(3)
		•		1				
	ł		1	J	1	l	l	A(1)
	5.4.3	Requirements for Requests	NO	PEW	ALL	ALL	W, Z	[A(1)
	1	for Deviation (RFDs)		1	Ì	1	1	i
	5.4.3.1	Restrictions on deviations	1	1	}	}	}	j
	5.4.3.2	Recurring deviations		1	Ī	1	1	l
	5.4.3.3	Classification of deviations	1	1	Į.	1		I
	5.4.3.3.1	Minor	- 1	l .	l l	1	Į	1
	5.4.3.3.2	Major	1	ì	l .	1	I	1
	5.4.3.3.3	Critical	1	1	1	i	l	1
	5.4.3.4	Format	ł	1	ł	į.	1	A(2)
	1	[Invokes APPENDIX E]		1	1	ì	ì	1 ^\'-'
	5.4.3.5	Disposition of deviations	1	1	1	ł	1	1
	5.4.3.5.1	Minor deviations	1	1	I		ł	1
	5.4.3.5.2	Critical and major deviations			1		ل	<u> </u>

Table II. Tailoring guide for use with MIL-STD-973 - Continued

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		- 1	i	1		1	1
PARA #	PARAGRAPH TITLE	<u>D/V</u>	EMD NO	PRD	OPS	NOTE	SMPL A(1)
5.4.4	Requirements for Requests	NO	NO	ALL	ALL	x, z	A(1)
ł	for Waiver (RFWs)	i	1	l	i	1	1
5.4.4.1	Bankat and an analysis	1	1		1	1	l
5.4.4.2	Restrictions on waivers	ł	}		•		1
	Recurring waivers	· I	}	1		I	Ì
5.4.4.3	Classification of waivers	ľ	1	1	1	1	ļ
5.4.4.3.1	Classification of waivers]	1	ł	ł		1
5.4.4.3.2	Minor	1	1	1	i		1
5.4.4.3.2	Major	ļ	1		ı		ĺ
5.4.4.3.3	Critical	i	1	ł	1		
5.4.4.4	Pormat	1		i	I.		A(2)
ļ	[Invokes APPENDIX E]	1		I	1	I	1
5.4.4.5	Disposition of waivers	1		1	1	1	1
5.4.4.5.1	Minor waivers	i	1	1	1	ł	1
5.4.4.5.2	Critical and major wavers	4	1	1)		Į.
3.4.4.3.2	Critical and major wavers		 	↓	↓	ļ	!
l		}	1		1	ı	1
5.4.5	Parts substitution	NO	NO	ALL	ALL	z	C(1)
							1
5.4.6	Rgts for Spec Change Notices	ALL	ALL	ALL	ALL		
3.4.0	(SCNs) [Invokes APPX F]	1 ~~	, Au	A LL	I WITT	2	A(1) A(2)
5.4.6.1	SCN cover page	- 1	1	i	į.	1	1 *121
5.4.6.2	Sur cover page		1	1		1	ł
5.4.6.3	Attachments to proposed SCN Supersession	- [1		1	1
5.4.6.4		I		1		ļ	İ
5.4.6.5	Approved SCN	1		1		i	1
3.4.6.3	Changed pages		ļ	 	ļ	ļ	ļ
		ļ		1	Į.	ļ	
5.4.7	Rgts for Notice of Revision	1	1	1	ı	1	C(1)
i	(NORs) [Invokes APPX G]	1	ŀ	1		1	C(2)
			 		 	1	
		1		1		i	1
5.4.8	Config ctrl (Short-fm Proced)	NO.	NO	OPT	OPT	y. 2	A(1)
3.1.0.1	Purpose		 	↓	┿	}	
1		į	1	1	l	1	i
5.4.8.2	Requirements for ECPs	l NO	NO	OPT	OPT	1 2	ļ.
5.4.8.2.1	ECP format	""		1	1 0	-	1
1	[Invokes APPENDIX D]	- 1	ļ	1	1	1	A(0)
5.4.8.2.2	Expediting ECPs		1	I	1	I	^\'-'
5.4.8.2.3	Revisions	1	ł	1	1	i	1
5.4.8.2.4	ECP Coverage	1	1	1		1	1
5.4.0.2.5	ECP supporting data	1	1	Į	1	1	1
5.4.8.2.6	SCP approval	- 1	1	ł	1	ļ	1
5.4.8.2.7	Disapproval	- 1	i	1	1	i	1
	promphoto.		+	 	+	 	+
1		1	1	1		1	
5.4.8.3	Requirements for deviations	NO	NO	OPT	OPT	Z	-1
5.4.8.3.1	Restrictions on deviations			1	1	Į.	1
5.4.8.3.2	Recurring deviations		1	1	1	1	1
5.4.8.3.3	Deviation format	į.	1	1	1	1	1
1	[Invokes APPENDIX E]	1		i i	1	1	A(2)
5.4.8.3.4	Classification of deviations	l l		1	1	1	1
		ı	1	ī	1	1	1
5.4.8.3.5	Disposition of deviations		L	L	1	4	1

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Table II. Tailoring guide for use with MIL-STD-973 - Continued

				,			
PARA # 5.4.8.4	PARAGRAPH TITLE Requirements for waivers	D/V NO	EMD NO	PRD OPT	OPS OPT	NOTE 2	<u>SMPL</u>
5.4.8.4.1 5.4.8.4.2 5.4.8.4.3	Restrictions on waivers Recurring waivers Waiver format [Invokes APPENDIX E] Classification of waiver						A(2)
5.4.8.4.5	Disposition of waiver		<u> </u>		<u> </u>	<u> </u>	
5.5 5.5.1 5.5.2	Config Status Acctg (CSA) Purpose of CSA CSA requirements [Invokes APPENDIX H]	OPT OPT OPT	ALL ALL ALL	ALL ALL ALL	ALL ALL ALL	22 22 23	B(1)
5.5.3 5.5.4 5.5.5	Preferred information system Retention of histor database CSA data elements [Invokes APPENDIX I]	OPT ALL OPT	ALL ALL ALL	ALL ALL	ALL ALL ALL		B(2)
5.5.6 5.5.7 5.5.8	Contractor focal point CSA analysis requirements Reporting accomp of retro chas [Invokes APPENDIX J]	ALL FEW NO	ALL FEW NO	ALL OPT OPT	ALL OPT OPT	ab ac	B(3) B(3) B(2)
5.6 5.6.1 5.6.1.1 5.6.1.2 5.6.1.3	Configuration audits Contractor partic/respons Subcontractors and suppliers Location Contractor reqts Government participation	N/A NO	H/A ALL	N/A ALL	N/A OPT		A(1)
5.6.2 5.6.2.1 5.6.2.2 5.6.2.3 5.6.2.4 5.6.2.5	Punctional Conf Audit (PCA) Contract reqts Contractor responsibility Verif procedures and rqts Post-audit actions PCA Certification Package	МО	ALL	NO -	NO	ad	A(1)
5.6.3 5.6.3.1 5.6.3.2 5.6.3.3 5.6.3.4 5.6.3.5	Physical Confg Audit (PCA) Contract reqts Contractor responsibility PCA procedures and rqts Post-audit actions PCA Certification Package	ио	OPT	OPT	ОРТ	ae	A(1)

- w. (5.4.3) This set of paragraphs on Requests for Deviation is most commonly invoked during the production phase, and beyond, on production and spares contracts. Deviations may also be applicable to the EMD phase, however, when it will be necessary to accept early test prototypes that will not fully comply with the performance requirements of the FCD and/or ACD.
- X. (5.4.4) This set of paragraphs on Requests for Waiver is most commonly invoked during the production phase and beyond in production and spares contracts. Waivers normally do not apply to the EMD phase.
- (5.4.7) Notices of revision normally apply when the у. activity proposing an engineering change does not control the originals of the documentation affected. It is normally used only for changes to drawings (the SCN is now authorized for use whether the ECP originator controls the original or not). The need for NORs occurs almost exclusively in the production phase and beyond; even then it is applicable to only a few contracts outside of the Army, which normally takes control of the document originals at the end of the EMD phase. [In situations where the originals of the specifications affected by an ECP are not controlled by the ECP originator, the Army may require NORs for the specifications in lieu of the SCNs.] When the program requires draft NORs to be submitted with the ECP, the contract task should specify that NORs are required only for those drawings/documents directly affected by the proposed change.
- 2. (5.4.8) The Short-form procedure for ECPs, deviations, and waivers is normally invoked as a complete package. The procedure is used almost exclusively when the producing contractor is not the activity that designed the item and cannot be expected to know the complete logistics impact of a change. This happens only in the production phase and beyond. This requirement is used in place of the requirements (see 5.4.2) for a complete ECP, deviation (see 5.4.3), and waiver (see 5.4.4). Requirements for SCNs (see 5.4.6) and for NORs (see 5.4.7) may also be invoked, when required.
- aa. (5.5.2) The status accounting information available in the demonstration/validation phase is limited; most programs would track the needed information internally rather than requiring the contractor to do it. In

later phases, the contractor would be required to provide increasing amounts of the information for government use NOTE: By invoking this requirement, Appendix H is also invoked; you MUST tailor that Appendix, using Table III as a guide, to identify the specific types of information your program will require from the contractor.

- ab. (5.5.7) If you want the contractor personnel to accomplish the task of monitoring the information system, and of notifying you when problems arise with the items or changes reflected in the information system, this task should be invoked. Normally, Government personnel accomplish this task.
- ac. (5.5.8) Retrofit involves delivered production units, so the tasking only applies to the production (and later) phase. As ECPs are submitted which involve retrofit of parts by contractor personnel, this task should be added to the contract as a part of the ECP. If a new contract is to be awarded solely for the development of a modification to an existing system, and if the new parts will be installed by the contractor, then this requirement should be invoked in that contract so that the CSA and maintenance records for the delivered units can be updated.
- ad. (5.6.2) The FCAs for each CI (and for the system, if applicable) are normally required as a part of the EMD contract. They should be accomplished prior to, or concurrent with, the accomplishment of the PCA for the same CI.
- (5.6.3) The PCAs for CSCIs are usually required as a ae. part of the EMD phase contract, although they are often delayed until after some, or all, of the integration (into system hardware) testing has been completed. For hardware, however, the EMD phase units are usually "preproduction prototypes", so the PCA task for hardware items is normally invoked in the first production contract when the development contractor has been preselected (usually in the acquisition strategy) to be the production contractor; the PCA can then be accomplished on an actual production unit. If the production program is to be competed, PCAs would be required in the EMD contract (to establish a product baseline for the competition) and in the first production contract (to update the approved product configuration documentation to match the final

requires considerable manpower to monitor. These optional Tasks should be used selectively; they would be most useful in situations where lack of supportability for the system/item can have significant National Security impacts to the extent that such detailed information is necessary to minimize such supportability problems.

- e. (H.5.1.5) Configuration of units in the field. This paragraph and Task 501 are normally invoked only for the Production phase contract. The government support activity usually has an existing information system which will provide the information required for Tasks 502 and 503. If so, it should be used from the start of the delivery of production units to simplify the transition from a contractor to a government information system when production is complete.
- f. (H.5.1.6) Tracking audit action items. This paragraph and Tasks 601 and 602 would not normally be invoked on contracts. The government buying activity normally has sufficient resources to provide adequate tracking capabilities and retention of historical information.
- 6.3 <u>Data requirements</u>. The following Data Item Descriptions (DID's) must be listed, as applicable, on the Contract Data Requirements List (DD Form 1423) when this standard is applied on a contract, in order to obtain the data, except where DOD FAR Supplement 27.475-1 exempts the requirement for a DD Form 1423.

	Reference		
	Paragraph '	DID Number	DID Title
	5.2.1	DI-CMAN-80858A	Contractor's CM Plan
	5.3.2, 5.3.4	DI-CMAN-81293	Configuration Item
			Documentation Recommendation
#	5.3.5.2.1	DI-CMAN-80463B	Engineering Release Record
	5.3.7.1	DI-CMAN-81248	Interface Control Drawing
			Documentation
	5.3.7.2.2	DI-CMAN-81247A	Interface Control Management
			Data
#	5.4.2.3.3.1.2	DI-CMAN-81246A	Advanće Change Study Notice
#	5.4.2.3.5,	DI-CMAN-80639B	Engineering Change Proposal
#	5.4.2.4.1,		
#	5.4.8.2.1		
#	5.4.3.4,	DI-CMAN-80640B	Request for Deviation
#	5.4.8.3.3		•

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#	Reference Paragraph 5.4.4.4, 5.4.8.4.3	DID Number DI-CMAN-80641B	DID Title Request for Waiver
#		DI-CMAN-80643B	Specification Change Notice
#	5.4.6		
#	5.4.7	DI-CMAN-80642B	Notice of Revision
	5.5.5	DI-CMAN-81253	Configuration Status Accounting Information
	5.5.8	DI-CMAN-81245	Installation Completion Notification
	5.6.1.2	DI-CMAN-80556A	Configuration Audit Plan
	5.6.1.2	DI-ADMN-81249	Conference Agenda
	5.6.1.2	DI-ADMN-81250	Conference Minutes
			Configuration Audit Summary
	5.6.2.5,	DI-CMAN-81022B	_
	5.6.3.5		Report

The above DID's are those cleared as of the date of this standard. The current issue of DOD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL) must be researched to ensure that only current, cleared DID's are cited on the DD Form 1423.

6.4 <u>Supersession data</u>. The following military standards are cancelled by MIL-STD-973:

MIL-STD-480	Configuration Control - Engineering Changes, Deviations, and Waivers
MIL-STD-481	Configuration Control - Short Form
MIL-STD-482	Configuration Status Accounting Data Elements and Related Features
MIL-STD-483	Configuration Management Practices
MIL-STD-1456	Configuration Management Plan
MIL-STD-1521	Technical Reviews and Audits for Systems, Equipments, and Computer Software (Appendixes G, H, and I only)

A paragraph-by-paragraph cross-reference guide for all the above documents and for DOD-STD-2167 is provided in Appendix K for information.

6.5 Subject term (key word) listing.

Advance change study notice Baseline Configuration audit

Configuration control Configuration control board Configuration documentation Configuration identification Configuration item Configuration management plan Configuration status accounting Computer software configuration item Developmental configuration Deviation/Request for Deviation Effectivity Engineering change proposal Engineering release Hardware configuration item Interface control Interface control working group Non-developmental item Notice of Revision Specification Change Notice Version Waiver/Request for Waiver Work breakdown structure

6.6 Useful references.

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- a. CAGE Codes are provided in Defense Logistic Agency (DLA) Cataloging Handbook H4/H8 Series. (See 3.8)
- Requirements associated with distribution statements for technical data are contained in MIL-STD-1806,
 "Marking Technical Data Prepared By or For the Department of Defense." (See 4.3.1)
- c. Requirements associated with Work Breakdown
 Structures (WBSs) are provided in MIL-STD-881, "Work
 Breakdown Structures for Defense Materiel Items."
 WBSs will normally be contractually invoked in
 development contracts only. (See 5.2.2)
- d. Specification identifiers and procedures associated with changes to specifications are contained in MIL STD-490, "Program-unique Specification Practices," and MIL-STD-961, "Military Specifications and Associated Documents, Preparation of." Similar material associated with engineering drawings, associated lists and ancillary documents is contained in MIL-STD-100, "Engineering Drawing Practices." (See 5.3.6.3)
- e. Part/item identification numbers are addressed in MIL-STD-100 and MIL-STD-961. (See 5.3.6.4)

# # # # # #	f .	CIs, including component parts, assemblies, units, sets and other pieces of military property are ofter marked with their identifiers in accordance with MIL-STD-130, "Identification Marking of US Military Property;" or with identification plates/nameplates in accordance with MIL-P-15024, "Plates, Tags and Bands for Identification of Equipment." (See 5.3.6.7)
# # #	g.	Requirements associated with a system hazard analysis are contained in MIL-STD-882, "System Safty Program Requirements." (See 5.4.2.3.2g)
# # #	h.	Requirements associated with the DoD Parts Control Program are contained in MIL-STD-965, "Parts Control Program." (See5.6.3.3d)

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CONTRACTOR'S CONFIGURATION MANAGEMENT (CM) PLAN

A.1 GENERAL

- A.1.1 <u>Scope</u>. This Appendix contains the format and content preparation instructions for the Contractor's CM Plan required by paragraph 5.2.1. This Appendix is a mandatory part of this standard. The information contained herein is intended for compliance.
- A.1.2 <u>Applicability</u>. The provisions of this Appendix apply whenever the contractor is required to prepare a CM plan.

A.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

A.3 DEFINITIONS

A.3.1 <u>Definitions used in this Appendix</u>. For the purpose of this Appendix, the definitions contained in Section 3 shall apply.

A.4 GENERAL REQUIREMENTS

A.4.1 Content and format instructions. The plan shall be prepared on bound 8 1/2 x 11 inch 20 pound copier paper (hard copy, or a form of electronic media as specified in the contract. Each page prior to Section 1 shall be numbered in lower-case roman numerals beginning with Page ii for the Table of Contents. Each page from section 1 through the end of the document, shall be numbered consecutively in Arabic numerals. For hard copy format, the document may be printed on one or both sides of each page (single-sided/double-sided). For single-sided documents, all pages shall contain the document control number in the top right-hand corner. For double-sided documents, all even numbered pages shall have the page number on the lower left-hand side of the document and all odd-numbered pages shall have the page number on the lower right-hand side of the document. For double-sided documents, the control number shall be placed in the top right-hand corner for each odd-numbered page, and in the top left-hand corner for each even-numbered page. All paragraph and subparagraph headings listed in paragraph A.4.2 below shall be included in the plan. event that a paragraph or

- B.5.3.2 Documentation of the actual released configuration for each CI at the time of its formal acceptance shall be retained in release records for the time specified in the retention of records requirements in the contract.
- B.5.4 Release functional capabilities during testing. Prior to establishment of the PBL, detail design documents under the control of the contractor during developmental testing and/or initial operational testing shall be kept current with all test activity changes/modifications and releases as follows:
 - a. Superseded requirements may be replaced by superseding requirements in the release records for the units which are being logistically supported by the contractor. Superseded requirements shall be retained as historical information, however, to allow verification of test data and completion of the FCA.
 - b. Superseded requirements shall be retained in all release records for the documentation until status accounting records indicate that superseded configurations no longer exist or until closeout of all action items from the FCA, whichever is longer.
 - c. Engineering changes to CIs which have been formally accepted by the Government, and which are not being logistically supported by the contractor, shall be released for Government approval and action.
- B.5.5 <u>Correlation of engineering changes with manufactured product</u>. Each Class I engineering change approved by the Government shall be verified to have been incorporated into all units, as designated by the ECP.

INSTRUCTIONS FOR THE PREPARATION OF AN ENGINEERING RELEASE RECORD (ERR)

C.1 GENERAL

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- C.1.1 <u>Scope</u>. This Appendix establishes uniform requirements for the preparation of the "Engineering Release Record". This Appendix is a mandatory part of the standard. The information contained herein is intended for compliance.
- C.1.2 <u>Application</u>. The provisions of this Appendix apply whenever the ERR is utilized to authorize use of new approved configuration documentation.

C.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

C.3 DEFINITIONS

C.3.1 <u>Definitions used in this Appendix</u>. For the purposes of this Appendix, the definitions contained in Section 3 of this standard shall apply.

C.4 GENERAL REQUIREMENTS

- C.4.1 <u>DD Form 2617 and 2617C</u>. DD Form 2617, Figure 8a, and DD Form 2617C, Figure 8b, are not a requirement of this standard, and are provided for reference only. ERRs shall be prepared in contractor format, containing the information required by this Appendix in Block Number sequence.
- C.4.2 <u>Engineering Release Record</u>. The contractor shall use an ERR to authorize the use of configuration documentation that establishes the functional, allocated, and product baselines or changes an established configuration baseline.
- C.5 DETAILED REQUIREMENTS. Detailed instruction for # completion of the ERR.
 - C.5.1 <u>Block 1. ERR NO</u>. Enter the unique ERR identification number or the number assigned by the Government.

- C.5.2 <u>Block 2. Date</u>. Entry will not be made in Block 2 until completion of Block 13 (Approved by) is accomplished by an authorized official. The date of the completion of Block 13 will then be entered in Block 2 in six numeric characters; year, month, day, each separated by a hyphen (-), e.g., "91-02-06".
- C.5.3 <u>Block 3. Procuring Activity Number</u>. To be used by Government for entry of internal processing number, if desired.
- C.5.4 <u>Block 4. DODAAC</u>. Enter the DODAAC of the procuring agency.
- C.5.5 <u>Block 5. Baseline Established or Changed</u>. Check appropriate block to identify the configuration baseline established or changed.
- C.5.6 <u>Block 6. Type of Release</u>. Check appropriate block to indicate whether release is establishing a baseline (initial) or a change to the established configuration baseline.
- C.5.7 <u>Block 7</u>. Enter the ECP number and the date approved on the lines provided, when applicable.
- C.5.8 <u>Block 8. Functional Assembly Nomenclature</u>. Enter part number and functional assembly nomenclature of the lowest functional assembly to which the entire ERR applies.
- C.5.9 <u>Block 9.</u> <u>System or Configuration Item Nomenclature and Part Number.</u> Enter the system or configuration item nomenclature and part number.
- C.5.10 Block 10. Remarks or Miscellaneous. Enter the identification numbers of additional ECPS, when applicable. This block can also be used to note the item which the documentation identifies, e.g., system specification, minor item, configuration item, critical component, partial or complete releases, or any other remarks pertinent to the data being released.
- C.5.11 <u>Block 11.</u> <u>Data Released or Revised</u>. Enter each document and sheet as a separate line entry. EXCEPTION: Multisheet documents will be entered as a single line entry when all sheets are maintained at the same revision level.
- C.5.11.1 <u>Block 11a. CAGE Code</u>. Enter the CAGE Code of the document listed in Block 11c.

C.5.11.2 <u>Block 11b. Type</u>. Enter document type code (commonly used acronym as shown in the following examples):

	•		
		CODE	DOCUMENT TITLE (EXAMPLES)
		Blank	Drawings
		SQ	Quality Assurance Provisions
#		ĬĹ	Index List
#		EL	List of Inspection Equipment
##		EL DL	Data List
##		PL	Parts List
π		PS	Special Packaging Instructions
		ED	tiet of Equipment - Depot Installed
		EM	List of Equipment - Manufacturer
			Installed
		ET	List of Equipment - Troop Installed
		B-5	Development Specification
		C-5	Product Specification
#		CPTPR	Computer Program Test Procedure
		CPTS	Computer Program Test Specification
		DBDD	Data Base Design Document
		FSM	Firmware Support Manual Interface Design Specification
#		IDS	Interface Requirements Specification
		IRS	Life Cycle Software Support
		LCUG	Environment User's Guide
		PDD	Preliminary Description Document
#		PDS	Program Design Specification
		PPD	Program Package Document
ш		PPS	Program Performance Specification
#		SPS	Software Product Specification
		SRS	Software Requirements Specification
		SS	System Specification
		STD	Software Test Description
#	•	STPR	Software Test Procedure
#		TEMP	Test and Evaluation Master Plan
π		VDD	Version Description Document

- C.5.11.3 <u>Block 11c. Number</u>. Enter documents in a logical order by types of documents in ascending numerical and alphanumerical sequence. Group drawings by size.
- C.5.11.4 <u>Block 11d. Page of</u>. Enter the particular page number of the total count of pages in Column 11e. No entry required for single page documents.

- C.5.11.5 <u>Block lie. Pages</u>. The total count of pages comprising the document. No entry required for single page documents.
- C.5.11.6 <u>Block llf. Letter</u>. Enter the new revision symbol to be issued for the document listed in Column llc. For original documentation, enter a hyphen (-).
- C.5.11.7 <u>Block llg. Date</u>. Enter the document date in six numeric characters, year, month, day, each separated by a hyphen (-), e.g., "91-02-06".
 - C.5.11.8 Block 11h. Release.
 - (1) <u>Initial Release (IR)</u>. Enter "X" if the document is being initially released.
 - (2) <u>New Application Release (NAR)</u>. Enter "X" if the document has a new application.
 - C.5.11.9 Block 11i. Change.
 - (1) Change (CH). Enter "X" for each document listed for which the revision level of an established baseline document is being changed.
 - (2) <u>Cancellation (CAN)</u>. Enter "X" for each listed document which is to be deleted from an established configuration baseline.
 - C.5.11.10 Block 11j. Other. For optional use.
- C.5.12' <u>Block 12.</u> <u>Submitted by</u>. Enter type, printed, or stamped name and signature of responsible drafting or engineering services contractor organization or engineering segment.
- C.5.13 <u>Block 13. Approved by</u>. To be completed by the authorized Government official.

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INSTRUCTIONS FOR THE PREPARATION OF AN ECP

D.1 GENERAL

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- D.1.1 <u>Scope</u>. This Appendix establishes uniform requirements for the preparation of an Engineering Change Proposal. This Appendix is a mandatory part of the standard. The information contained herein is intended for compliance.
- D.1.2 <u>Application</u>. The provisions of this Appendix apply to all ECP preparing activities and to proposed engineering changes for systems, CIs, HWCIs, and CSCIs.

D.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

D.3 DEFINITIONS

D.3.1 <u>Definitions used in this Appendix</u>. For purposes of this Appendix, the definitions contained in Section 3 of this standard shall apply.

D.4 GENERAL REQUIREMENTS

- D.4.1 <u>ECP forms</u>. DD Forms 1692 through 1692/6 (See Figures 9a 9g) are not a requirement of this standard, and are provided for reference only. ECPs shall be prepared in contractor format, containing the information required by this appendix in Block Number sequence.
- D.4.2 <u>Supporting data</u>. In addition to the information required by this Appendix, the ECP package shall include supporting data. (See 5.4.2.2.3.3)
- # D.4.3 <u>Distribution statement</u>. The appropriate distribution markings shall be affixed to the ECP package in accordance with the requirements of the contract. (See 4.3.1)

- D.5 DETAILED REQUIREMENTS. Detailed instruction for completion of the ECP.
 - D.5.1 Instructions associated with Figure 9a.
 - D.5.1.1 <u>Block 1. Date</u>. Enter the submittal date of the ECP or of the revision to the ECP.
 - D.5.1.2 <u>Block 2. Procuring activity number</u>. To be used by Government for entry of internal processing number, if desired.
 - D.5.1.3 <u>Block 3. DODAAC</u>. Enter the DODAAC of the procuring activity.
 - D.5.1.4 <u>Block 4. Originator name and address</u>. Enter the name and address of the contractor or Government activity, submitting the ECP. Use Block 4a for the contractor or Government activity name (inclusion of submitting individual's name is optional). Use Block 4b for the contractor or Government activity address.
 - D.5.1.5 <u>Block 5. Class of ECP</u>. Enter I or II for the applicable ECP as defined in 5.4.2.2.1 or 5.4.2.4. When ECP short form procedure is specified by the contract, the Government representative shall assign the change classification.
 - D.5.1.6 <u>Block 6. Justification code</u>. Enter the justificatic code, as defined by 5.4.2.3.2, which is applicable to the proposed Class I engineering change. When short form procedure is specified in the contract, the Government representative will assign the appropriate justification code for other than VECPs.

CODES

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- B Interface
- C Compatibility
- D Deficiency
- 0 Operational or logistics support
- P Production stoppage
- R Cost Reduction
- S Safety
- V Value engineering
- D.5.1.6.1 <u>Value engineering ECP</u>. When the contract contains a value engineering clause, each value engineering ECP shall be identified both by the "V" in Block 6 and by the entry of the following notation at the top of Page 1 of the ECP form: "VALUE ENGINEERING CHANGE PURSUANT TO CONTRACT CLAUSE."

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- D.5.1.7 <u>Block 7. Priority</u>. The contractor shall recommend a priority to the Government and enter an "E", "U", or "R" (Emergency, Urgent or Routine) as defined in 5.4.2.3.4. When short form procedure is specified by contract, the Government representative will assign the priority.
 - D.5.1.8 Block 8. ECP designation.
- D.5.1.8.1 <u>Block 8a. Model/Type</u>. Enter model or type designation of the CI for which this proposal is being filled out. For CSCIs, enter the CSCI identification number.
- D.5.1.8.2 <u>Block 8b. CAGE code</u>. Enter the CAGE code for the activity originating the ECP.
- D.5.1.8.3 <u>Block 8c. System designation</u>. The system or toplevel CI designation or nomenclature assigned by the Government shall be entered, if known.
- D.5.1.8.4 <u>Block 8d. ECP number</u>. Once an ECP number is assigned to the first submission of a change proposal, that number shall be retained for all subsequent submissions of that change proposal. One of the following methods of assigning ECP numbers may be used unless otherwise stated in the contract:
 - a. ECP numbers shall run consecutively commencing with number 1, for each CAGE Code identified activity, or ECP numbers may be assigned in a separate series for each system that the contractor is producing.
 - b. When an ECP is split into a basic ECP and related ECPs, the basic ECP shall be identified with the number prescribed above and each related ECP shall be identified by the basic number plus a separate dash number. The number of characters in the ECP number, dash number, type, and revision identification shall not exceed 15.
 - c. Other systems may be used provided the ECP number is unique for any CAGE Code identified activity, and the 15 character limitation in paragraph (2) above is not exceeded.
- D.5.1.8.5 <u>Block 8e. Type</u>. Enter either a "P" for preliminary, or "F" for formal. (See 5.4.2.3.3)

- D.5.1.8.6 <u>Block 8f. Revision</u>. If an ECP is being revised, enter the proper identification of the revision, i.e., R1 for the first revision; R.. for subsequent revisions. (The date submitted shall be the date of the revised ECP.) (See D.5.1.1)
- D.5.1.9 <u>Block 9. Baseline affected</u>. Place an "X" in the box(es) according to the baseline(s) affected.
- D.5.1.10 <u>Block 10. Other systems/configuration items</u> <u>affected</u>. Enter an "X" in the "yes" or "no" box, as applicable, to indicate whether there is an effect on other systems or CIs which will require the submittal of related Class I ECPs. Supply details in Blocks 28 and 30.
- D.5.1.11 <u>Block 11. Specifications affected</u>. If specifications cited in the contract are affected by the ECP, their identity by the CAGE code of the design activity, document number, revision letter, and the SCN (or NOR) number of the SCN (or NOR) being submitted with the ECP, shall be entered.
- D.5.1.12 <u>Block 12. Drawings affected</u>. Enter the indicated information for all drawings affected by the ECP. The CAGE code to be entered is that of the design activity whose number is assigned to the listed drawing(s). If more than three drawings are affected, enter the information required in the first line for the top-level drawing affected by the ECP and make direct reference on the second line to the enclosure and paragraph containing the list of all the affected drawings.
- D.5.1.13 <u>Block 13</u>, <u>Title of change</u>. Enter a brief title to identify the component or system affected by the ECP. Do not include the purpose or description which are to be entered in Block 16. For example: F-18 Aircraft Air Turbine Start Connector Backshell Replacement; AN/AYK-14(v) CP-1502/CP-1503 Reconfiguration to CP-1799; (CSCI name) Block Update.
- D.5.1.14 Block 14. Contract number(s) and line item(s). Enter the number(s) of all currently active contract(s), and the affected contract line item number(s), at the originating CAGE-coded activity that are affected by the engineering change. If more contracts are affected than can be fit in the block, make reference to the enclosure and paragraph where this information is provided. In the case of a Government-prepared change, the task number under which the ECP will be funded and implemented shall be provided in this block.

D.5.1.22 <u>Block 22. Effect on production delivery schedule.</u> State the estimated delivery schedule of items incorporating the change, either in terms of days after contractual approval, or by specific dates contingent upon contractual approval by a specified date. If there will be no effect on the delivery schedule, so state. For a complex ECP, or for related ECPs, this delivery date will be repeated on the milestone chart together with the schedule for other interrelated actions.

D.5.1.23 Block 23. Retrofit.

- D.5.1.23.1 <u>Block 23a. Recommended item effectivity</u>. When the contractor recommends that the engineering change be accomplished in accepted items by retrofit, the quantities and serial (or lot) numbers of accepted items in which the change will be incorporated by retrofit shall be entered in Block 23a, or in a referenced enclosure. Such statement regarding items currently in production shall be based upon the estimated approval date of the ECP.
- D.5.1.23.2 <u>Block 23b. Ship/vehicle class affected</u>. When the delivered CI is installed in one or more ship/vehicle classes, enter the identification of such classes. Not applicable when ECP Short Form procedure is specified by contract.
- D.5.1.23.3 <u>Block 23c. Estimated kit delivery schedule</u>. State estimated kit delivery schedule by quantity and date. When special tooling for retrofit is required for Government use, reference an enclosure in Block 23C on which is specified the dates of availability of tools, jigs, and test equipment required in conjunction with the kits to accomplish the change.
- D.5.1.23.4 <u>Block 23d. Locations or ship/vehicle numbers affected</u>. State the location(s) at which retrofit is to be accomplished. If retrofit is to be accomplished in ships (or in vehicles for which the serial numbers are not shown in Block 23), enter the ship hull numbers (or vehicle numbers). Not applicable when ECP Short Form procedure is specified by contract.
- D.5.1.23.5 For CSCI changes which are to be incorporated as part of a hardware ore equipment change, and where implementation of the CSCI change is per a hardware retrofit schedule, or where the fieleded version of the softwre is to be replaced,

the appropraite information will be included in Blocks 23a - 23d either directly or by reference.

- D.5.1.24 <u>Block 24. Estimated costs/savings under contract</u>. Enter the total estimated costs/savings impact of the ECP on the contract for the subject CI. This Figure normally will be the same as that in column 5, line e, of DD Form 1692/3 (Page 4). (Savings shall be shown in parentheses.)
- D.5.1.25 <u>Block 25. Estimated net total costs/savings</u>. Enter the total estimated costs/savings impact of the basic and all related ECPs, including other costs/savings to the Government. This Figure normally will be the same as that in column 6 the bottom line of Page 4 or, if there are related ECPs, in column 4, line e, of Page 5. Not applicable when ECP Short Form procedures are specified by contract.
- D.5.1.26 <u>Block 26. Submitting activity authorized signature</u>. An authorized official of the activity entered in Block 4 shall sign this block and provide title in Block 26b. This indicates the ECP has the official sanction of the submitting activity.
- D.5.1.27 <u>Block 27. Approval/disapproval</u>. This block is for use by the Government. [Note: The Contract Administration Office will review all engineering changes unless otherwise specified in the contract. It will recommend approval or disapproval of Class ECPs by marking Block 27a and completing Block 27d, 27e and 27f. It will concur or non-concur in the classification of Class II engineering changes by marking Block 27c accordingly and by completing Block 27d, 27e and 27f. When the Government requires approval of Class II engineering changes prior to contractor implementation, the designated approval activity will mark Block 27b accordingly and will complete Blocks 27d, 27e, and 27f. For Class I ECPs, the designated Government approval authority will mark Block 27g accordingly and will complete Block 27h, 27i and 27j.]
- D.5.2 <u>Instructions associated with Figure 9b</u>, <u>Effects on Functional/Allocated Configuration Identification</u>. The information required for these Blocks is to be completed only if the proposed change affects the system specification or the item development specification(s). If a separate product function specification is used, effects on such specification of changes proposed after the PBL has been established shall be described as required by Block Number 37 through 50.

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- D.5.2.1 <u>ECP number</u>. Enter the same ECP number as in Block 8d of DD Form 1692 (Page 1). If the ECP number is assigned on the basis of the system, the system designation also shall be given.
- D.5.2.2 <u>Block 28. Other systems affected</u>. Insert data when Block 7 of DD Form 1692 (Page 1) is checked "yes".
- D.5.2.3 <u>Block 29. Other contractors/activities affected</u>. Identify the other contractors or Government activities which will be affected by this engineering change.
- D.5.2.4 <u>Block 30. Configuration items affected</u>. Enter the names and numbers of all CIs, maintenance and operator training equipment, and support equipment affected.
- D.5.2.5 Block 31. Effects on performance allocations and interfaces in system specification. Describe in this block the changes in performance allocations and in the functional/physical interfaces defined in the system specification.
- D.5.2.6 <u>Block 32. Effects on employment, integrated logistic support, training, operational effectiveness, or software.</u>
 - a. For hardware, describe the effects of the proposed change on employment, deployment, logistics, and/or personnel and training requirements which have been specified in the approved system and/or CI specifications, including any changes or effects on the operability of the system. In particular, there shall be an entry detailing any effect on interoperability.
 - b. For CSCIs, the following information shall be entered as applicable to the degree of design development of the CSCI at the time of ECP submission:
 - (1) Identify any required changes to the data base parameters or values, or to data base management procedures;
 - (2) Identify and explain any anticipated effects of the proposed change on acceptable computer operating time and cycle-time utilization;

- (3) Provide an estimate of the net effect on computer software storage; and,
- (4) Identify and explain any other relevant impact of the proposed change on utilization of the system.
- D.5.2.7 <u>Block 33.</u> <u>Effects on configuration item</u> <u>specifications</u>. The effect of the proposed change on performance shall be described in quantitative terms as it relates to the parameters contained in the CI development specifications. (See MIL-STD-490)

D.5.2.8 Block 34. Developmental requirements and status.

- a. For hardware, when the proposed engineering change requires a major revision of the development program (e.g., new prototypes, additional design review activity, tests to be reaccomplished), the nature of the new development program shall be described in detail, including the status of programs already begun.
- b. For CSCIs, the contractor shall identify the scheduled sequence of computer software design and test activities which will be required. ECPs initiated after preliminary design which affect the FBL and/or the ABL shall identify, as appropriate, significant requirements for computer software redesign, recoding, repetition of testing, changes to the software engineering/test environments, special installation, adaptation, checkout, and live environment testing. In addition, the specific impact of these factors on approved schedules shall be identified. The impact of the software change on the hardware design and input/ output cabling shall also be detailed.
- D.5.2.9 <u>Block 35. Trade-offs and alternative solutions</u>. A summary of the various solutions considered shall be included with an analysis showing the reasons for adopting the solution proposed by the ECP.
- D.5.2.10 Block 36. Date by which contractual authority is needed. Enter the date contractual authority will be required in order to maintain the established schedule.

D.5.3 <u>Instructions associated with Figure 9c, Effects on product configuration documentation, logistics and operations.</u>
Certain information required for these Blocks may already have been required in Blocks 1 trhough 36 or does not apply to computer software. When this information has already been supplied, a cross-reference to such information will be adequate.

- a. For hardware, if any specific logistic interoperability factors are affected, the contractor shall provide information detailing the possible impact on the operational configuration on an attached page.
- b. For CSCIs, the software engineering and test environments are usually not affected by changes in the product configuration of a CSCI. In Block 42, the contractor shall provide information about the status of the software redesign and retesting effort. There shall also be a review of the intent of Blocks 40, 41, 45, 46, 47 and 49, to document CSCI impacts in these areas.
- D.5.3.1 <u>ECP number</u>. Enter the same ECP number as in Block 8d of DD Form 1692 (Page 1). If the number is assigned by system, include the system designation.
- D.5.3.2 Block 37. Effect on product configuration documentation or contract. The effects on the approved CI product specifications shall be described by reference to the SCNs, NORs or other enclosure(s) which cover such proposed text changes in detail. The effects on performance, weight, moment, etc., which are covered in the enclosure(s), shall be indexed by proper identification adjacent to the factor affected. The effects on drawings, when not completely covered on Page 1, shall be described in general terms by means of a referenced enclosure. Such enclosure may consist of a list of enclosed NORs if submittal of an NOR for each drawing affected is a requirement of the contract. Indicate any technical data submittal which is not provided for in the CDRL by means of a referenced enclosure. Address nomenclature change when applicable.
- D.5.3.3 Block 38. Effect on integrated logistics support elements. The effects of the engineering change on logistic support of the item shall be indicated by checking the appropriate boxes. These effects shall be explained in detail on an enclosure indexed by appropriate identification adjacent to the subject under discussion. The information required shall

indicate the method to be used to determine the integrated logistic support plans and items which will be required for the support of the new configuration as well as retrofitting previously delivered items to the same configuration. The following shall be covered as applicable:

- a. Effects on schedule and content of the ILS plan.
- b. Effect on maintenance concept and plans for the levels of maintenance and procedures.
- c. System and/or CI logistics support analysis (LSA) tasks to be accomplished and LSA data requiring update wherever it exists in the contract. (See 6.6)
- d. Extension/revision of the interim support plan.
- e. Spares and repair parts that are changed, modified, obsoleted or added, including detailed supply data for interim support spares.

NOTE: Failure to include detailed supply data will delay ECP processing.

f. Revised or new technical manuals.

- g. Revised or new facilities requirements and site activation plan.
- h. New, revised, obsoleted or additional support equipment (SE), test procedures and software. For items of SE and trainers which require change, furnish a cross reference to the related ECPs, and for any related ECP not furnished with the basic ECP, furnish a brief description of the proposed change(s) in SE and trainers.
- i. Qualitative and quantitative personnel requirements data which identify additions or deletions to operator or maintenance manpower in terms of personnel skill levels, knowledge and numbers required to support the CI as modified by the change.
- j. New operator and maintenance training requirements in terms of training equipment, trainers and training software for operator and maintenance courses. This

- D.5.3.9 <u>Block 44.</u> <u>Work-hours per unit to install retrofit kits</u>. Complete Blocks 44a through 44d to show the amount of work which must be programmed for various activities to install retrofit kits. Estimate work-hours to install retrofit kits when weapon system is undergoing overhaul.
- D.5.3.10 <u>Block 45. Work-hours to conduct system tests after retrofit</u>. Enter the work-hours required to test the system or the item following installation of the retrofit kit.
- D.5.3.11 <u>Block 46. This change must be accomplished</u>. Where previously approved engineering changes must be incorporated in a specific order in relation to the proposed change, such order should be specified.
- D.5.3.12 <u>Block 47.</u> <u>Is contractor field service engineering required?</u> Check applicable box. If "yes" attach proposed program for contractor participation.
- D.5.3.13 <u>Block 48. Out of service time</u>. Estimate the total time period from removal of the equipment from operational service until equipment will be returned to operational status after being retrofitted.
- D.5.3.14 <u>Block 49.</u> <u>Effect of this ECP and previously approved ECPs on item.</u> The contractor shall summarize the cumulative effect upon performance, weight, electrical load, etc., of this ECP and previously approved ECPs when design limitations are being approached or exceeded. Consequences of ECP disapproval may be stated in this block or in a referenced enclosure.
- D.5.3.15 <u>Block 50.</u> <u>Date contractual authority needed</u>. The contractor shall provide the date by which contractual authority to proceed is needed to maintain the estimated effectiveness specified in the ECP and to provide concurrent ILS and logistics support item deliveries. The contractor should consider the targets for decision (see 5.4.2.3.1.1) allowing additional time for review, mailing, and other incidental handling and processing requirements.
- D.5.4 <u>Instructions associated with Figure 9d. Estimated net total cost impact</u>. Block 51 is intended as the summary of the estimated net total cost/savings impact of a single ECP. In Blocks 51a through d, each cost factor associated with the ECP shall be considered as to whether such cost or portion thereof under the subject

contract is recurring or nonrecurring. Enter cost savings in columns (a) and (d) as applicable, using entries in the "unit" and "quantity" columns when appropriate. Savings shall be enclosed with parentheses. Other costs/savings to the Government resulting from approval of this ECP shall be entered in column (f) to the extent these costs can be determined by the contractor. estimate of cost impact will be used for planning purposes and for a cost reduction or VE ECP analysis as to the net saving that would result. Firm cost proposals shall be submitted on standard form (SF) 1411, together with the appropriate cost breakdown. If an ECP affects items being delivered to more than one service, a separate Block 51 shall be filled out for the quantities to be delivered to each service. Unless otherwise prescribed, costs of special tooling, scrap, redesign, etc. shall be divided between the using services on the basis of the percent of items furnished to each. The cost analysis applicable to each service shall be appropriately labeled on each submittal.

- D.5.4.1 <u>ECP number</u>. Enter the same ECP number as in Block 8d of DD Form 1692 (Page 1). If the number is assigned by system, include system designation.
- D.5.4.2 <u>Block 51</u>. <u>Estimated Costs/Savings Summary</u>, <u>Related ECPs</u>.
- D.5.4.2.1 <u>Block 51a. Production costs/savings</u>. Enter the estimate of costs/savings applicable to production of the CI resulting from incorporation of the change. Show redesign costs for the CI in the block titled "engineering, engineering data revisions" when the item is in production. Enter the projected life cycle costs/savings applicable to the planned production and spares buys of the item that are not yet on contract on the CONFIGURATION ITEM/CSCI line in column (f). Enter the subtotal of production costs (both nonrecurring and recurring) in the fifth column.
- D.5.4.2.2 Block 51b. Retrofit costs. Enter the estimate of costs applicable to retrofit of the item, including installation and testing costs. When Government personnel accomplish, or are involved in, the installation and/or testing activities, the estimated costs shall be entered in column (f) on the affected lines. Show design costs of the retrofit kit and data revision costs strictly related to retrofit when the CI is in production; show all redesign and data revision costs when the item is not in production. Costs of modifications required to existing GFE and subsequent testing also shall be shown. Enter

the subtotal of retrofit costs in the fifth column. If some or all of the retrofit activities and costs will have to be deferred and placed on contract at a future date, show that deferred portion of the cost applicable to each line of Block 51b in column (f).

- D.5.4.2.3 Block 51c. Integrated logistic support costs/ savings. Enter the estimated cost of the various elements of ILS applicable to the item covered by the ECP. On the line titled "interim support," estimated costs shall be entered based upon the period of time between initial installation/operation of the item (aircraft, tank, etc.) as modified by the ECP and Government attainment of support capability. Such "interim support" costs shall include costs estimates of contractor recommended/provided spares and repair parts, special support equipment, training equipment and personnel training program. On the line titled "maintenance manpower" shall be entered the estimated costs/ savings for the contracted maintenance support for the remainder of existing maintenance contracts. Other ILS costs/savings associated with ILS elements for which appropriate titles do not appear in Block 51c may be entered in place of a factor not used unless such costs are covered on DD Form 1692/4 (Page 5) or in related ECPs. Enter the subtotal of ILS costs/savings in column (e). Enter the operation and support portion of the life cycle cost/savings on the subtotal line in column (f).
- D.5.4.2.4 <u>Block 51d. Other costs/savings</u>. If there are other costs under the contract which do not fall under the production, retrofit or ILS headings, enter the total of such costs in Block 51d, column (e). If there are other costs to the Government which do not fall under the production, retrofit or ILS headings or under Block 51g, "coordination changes by Government, enter the total of such costs in Block 51d, column (f).
- D.5.4.2.5 <u>Block 51e.</u> <u>Subtotal costs/savings</u>. Enter the subtotals of columns (a), (d), (e), and (f) on this line. The subtotal in column (e) shall be the sum of columns (a) and (d). This subtotal under the contract then shall be entered on the line so titled in column (f) and on DD Form 1692 (Page 1), Block 24.
- D.5.4.2.6 <u>Block 51f.</u> Coordination of changes with other contractors. This term applies to interface changes to items other than GFE, and changes to GFE being covered under 51b. If such coordination changes are covered by related ECPs and summarized on DD Form 1692/4 (Page 5), the estimated costs thereof shall not be entered in Block 51f. However, if Page 5 is not required, or if costs of certain coordination changes are not

tabulated on Page 5, an estimate of such costs shall be entered in Block 51f, when available.

- D.5.4.2.7 <u>Block 51g.</u> <u>Coordination changes by Government</u>. Enter in this block an estimate of the cost to the Government of interface changes which must be accomplished in delivered items (aircraft, ships, facilities, etc.) to the extent such costs are not covered in Block 51b or on DD Form 1692/4 (Page 5).
- D.5.4.2.8 <u>Block 51h.</u> <u>Estimated net total costs/savings</u>. Enter the sum of all cost savings on column (f) and on DD Form 1692 (Page 1), Block 25.
- D.5.5 <u>Instruction associated with Figure 9e</u>, <u>Estimated costs/savings summary</u>, <u>related ECPs</u>. Block 52 is intended as the summary of the estimated net total cost impact of both the package of related ECPs and other associated new requirements which are needed to support the modified items. A few revised requirements for ILS, such as ILS plans and maintenance concepts do not appear as headings in Block 51. When only a single ECP is involved, these additional costs for revision of ILS plans, etc. should be shown in Block 51 under the ILS heading, and Block 52 may be omitted.

a. Responsibility for preparation:

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- (1) Prime contractor. The prime contractor shall summarize the costs/savings of all related ECPs for which the contractor is responsible in Block 52. If there is no system integrating contractor, the prime contractor submitting the basic ECP shall include the costs of related ECPs being submitted by other affected contractors to the extent such information is available.
- (2) System integrating contractor. When a system integrating contractor (or coordinating contractor) has contractual responsibility for ECP coordination, the contractor shall summarize the costs of related ECPs of the several primes involved in an interface or interrelated ECP in Block 52 and shall attach it to the ECP package.

- Summarization techniques. The costs of certain related b. ECPs are entirely ILS costs. Thus costs of ECPs for trainers, other training equipment and SE shall be listed in total under the "ILS costs" heading. Other ECPs (applicable to weapons, aircraft, tanks, subsystems thereof, etc.) shall be split into the four subtotals of "production," "retrofit," "ILS," and "other costs" for entry in Block 52. The sum of the four subtotals attributed in Block 52, column (c), to an individual ECP should agree with the subtotal of costs/savings under contract, line e, column (e) of Block 51 of that ECP. Cost breakdowns should be arranged in such manner that costs/savings are neither included more than once on the summary nor omitted. The purpose of the grouping on the cost summary is to arrive at a total ILS cost, and a net total cost of all actions for the complete group of related ECPs.
- c. Software changes only. Block 52 shall not apply in the case where all related ECPs being summarized refer to software changes only. However, Block 52 required information shall be provided with the ECP detailing the summary of the individual CSCI costs/savings for each of the related ECPs, grouped by the cost areas, and providing the total costs/savings for all of the related software ECPs.
- D.5.5.1 <u>ECP number</u>. Enter the same ECP number as in Block 8d of DD Form 1692 (Page 1). If the number is assigned by system, include system designation.
- D.5.5.2 <u>Block 52a. Production costs/savings</u>. Enter the ECP number in column (b). Enter the production subtotals from columns (e) and (f) of Block 51a of each ECP applicable to weapons, aircraft, tanks, subsystems thereof, etc. in columns (c) and (d) respectively. (Note that total costs of ECPs on trainers, training equipment, and SE are entered in Block 52c.)
- D.5.5.3 <u>Block 52b. Retrofit costs</u>. Retrofit costs may be charged by the Government to production funds or maintenance funds or may be split between the two. The type of funds used depends upon the phase in the item's life cycle. If the practice

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of the Government in this regard is known to the originator of Pag 5, retrofit costs shall be entered in, or split between, Blocks 52—and 52.c.1, as appropriate. If such practice is unknown, enter in Block 52b the ECP number and the retrofit subtotals from the columns (e) and (f) of Block 51b for each applicable ECP.

- D.5.5.4 <u>Block 52c.</u> <u>ILS costs/savings</u>. Enter retrofit costs in Block 52.c.1, if appropriate. Enter in Block 52.c.2 the ILS subtotals from columns (e) and (f) of Block 51c of each ECP applicable to weapons, aircraft, tanks, subsystems thereof, etc. As stated in D.5.4.4, enter costs of ECPs for ILS items in Blocks 52.c.3, 4, 5 and 6. Enter costs of revision or preparation of ILS plans and LSA records for the CI or complete system in Block 52.c.7. Enter in Block 52.c.9 costs of revision of the interim support plan to the extent such costs have not already been covered under Block 51c of DD Form 1692/3 (Page 4) of the applicable ECPs. Enter in Blocks 52.c.10 through 52.c.18 the costs of all new requirements for ILS not covered by ECPs, such costs being broken down into nonrecurring and recurring costs, as appropriate, and totalled in column (c).
- D.5.5.5 <u>Block 52d. Other costs/savings</u>. Enter in Block 52d the sum of the "other costs" totals from column (e) and (f) of Block 51d of each ECP applicable to weapons aircraft, tanks, subsystems thereof, etc. Enter the subtotals of columns (c) and (d) on this line. The subtotal under contract(s) shall then be entered on the line so titled in column (d).
- D.5.5.6 <u>Block 52e</u>. <u>Estimated net total costs/savings</u>. Enter the sum of the preceding two lines of column (d).
- D.5.6 Instructions associated with Figure 9f. "Engineering Change Proposal (Hardware)". See 5.4.2.3.5 for information as to when Block 56 is required. For software-only ECPs, Block 60 shall be used instead to summarize the detailed software events schedule. If the ECP impacts both software and hardware, the information required by both Blocks 56 and 60 shall be included, as appropriate.
- D.5.6.1 <u>ECP number</u>. Enter the same ECP number as in Block 8d of DD Form 1692 (Page 1). If the number is assigned by system, include system designation.
- D.5.6.2 <u>Block 53. CAGE code</u>. Enter the CAGE code for the activity originating the ECP.

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- D.5.6.3 <u>Block 54. Configuration item nomenclature</u>. Enter the information from Block 16.
- D.5.6.4 <u>Block 55</u>. <u>Title of change</u>. Enter the information from Block 13.
- D.5.6.5 <u>Block 56. Milestone chart</u>. Enter the symbols (see legend on form), as appropriate for the activity, to show the time phasing of the various deliveries of items, support equipment, training equipment, and documentation incorporating the basic and related ECPs. Enter other symbols and notations to show the initiation or termination of significant actions. All dates are based upon months after contractual approval of the basic ECPs.
- Change Proposal (Software). See 5.4.2.3.5 for information as to when Block 60 is required. For hardware-only ECPs, Block 56 shall be used instead to summarize the detailed hardware events schedule. If the ECP impacts both software and hardware, the information required by both Blocks 56 and 60 shall be included, as appropriate.
- D.5.7.1 <u>ECP number</u>. Enter the same ECP number as in Block 8d of DD Form 1692 (Page 1) If the number is assigned by system, include system designation.
- D.5.7.2 Block 57. CAGE Code. Enter the CAGE code for the activity originating the ECP.
- D.5.7.3 <u>Block 58. CSCI nomenclature</u>. Enter the CSCI name and identification number if applicable, or authorized name and number of the CI(s) affected by the ECP.
- D.5.7.4 <u>Block 59. Title of change</u>. Enter the information from Block 10.
- D.5.7.5 <u>Block 60. Milestone chart</u>. Enter the symbols (See legend on form.), as appropriate for the activity, to show the time phasing of the various deliveries of items, training equipment and documentation incorporating the basic and related ECPs. Enter other symbols and notations to show the initiation or termination of significant actions. All dates are based upon months after contractual approval of the basic ECP.

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MIL-STD-973 INTERIM NOTICE 3 (DO) APPENDIX D

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burden to the colection of information is elimened to completing and trendmy the advantage of binaries of population to before, weakington testigement by permitted and subject, preserved, beautises Project 1974. NOT RETURN YOUR COMPLETED FOR 165 OFFICER FOR THE CONTRACT/PROCT	Full reporting busen to this contenues in extension and accordance to extension the time for extension, weathing estiting data source, gathering and astronomy the contents of internation, and competition of internation, and internation, business of internation, and internation, and internation, and internation, and internation, and internation, and internation, and internation, and internation, and international extension and international extensions and international extension for the content of	uniting data sources, gathering and maintaining the ECP NUMBER of information, brinding suggestion for reducing States 1344, Artifugion, VA 22382-4392, and to the ST. CAGE CODE STATE TO THE GOVERNMENT ISSUING 1592.	
SE. COMPUTER SOFTWARE ITEM NOMENCLATURE	59. TITLE OF CHANGE	35	
60. DATE AUTHORIZATION TO PROCEED RECEIVED BY CONTRACTOR (YYMMDD)	S START DELIVERY	C COMPLETE DELIVERY	PROGRESS POINT
NO. OF MONTHS	1 2 3 4 5 6 7 0 0 10 11 10 13 14 15 16 13 1	17 16 19 39 21 21 23 24 25 26 21 16 31 39 39 31 31 32 31	11 14 15 16
(1) Software Engineering			
(2) Software Documentation			
(3) Software Replication			
(4) Software Distribution			
(1) Software Engineering Environment Upgrade			
(2) Software Test Environment Upgrade			
•			
(1) Operator			
(2) Maintenance			
NO. OF MONTHS		11 10 10 10 10 10 10 10 10 10 10 10 10 1	11 14 15 16

Figure 9g. Engineering Change Proposal - Page 7 REPRINTED WITHOUT CHANGE

MIL-STD-973 INTERIM NOTICE 3 (DO) APPENDIX E

INSTRUCTIONS FOR THE PREPARATION OF REQUEST FOR DEVIATION/WAIVER

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E.1 GENERAL

- E.1.1 <u>Scope</u>. This Appendix establishes uniform requirements for the preparation of the "Request for Deviation/Waiver." This Appendix is a mandatory part of the standard. The information contained herein is intended for compliance.
- E.1.2 <u>Application</u>. The provisions of this Appendix apply whenever a request for deviation or request for waiver is prepared.
 - E.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

- E.3 DEFINITIONS
- E.3.1 <u>Definitions used in this Appendix</u>. For purposes of this Appendix, the definitions contained in Section 3 of this standard shall apply.
 - E.4 GENERAL REQUIREMENTS

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- E.4.1 <u>DD Form 1694</u>. DD Form 1694, Figure 10, is not a requirement of this standard, and is provided for reference only. RFDs/RFWs shall be prepared in contractor format, containing the information required by this Appendix in Block Number sequence.
- E.4.2 Request for deviation. The contractor shall request a deviation when, prior to manufacture, it is necessary to depart temporarily from the applicable approved configuration documentation for a specific quantity of deliverable units. Normally, for the unit(s) affected, the different configuration will be permanent. (See 5.4.3)
- E.4.3 Request for waiver. The contractor shall request a waiver when, during or after manufacture, the contractor desires authorization to deliver nonconforming items to the Government which do not comply with the applicable technical requirements. For the unit(s) affected, the different configuration will normally be permanent. (See 5.4.4)

MIL-STD-973 INTERIM NOTICE 3 (DO) APPENDIX E

- E.5 DETAILED REQUIREMENTS. Detailed instructions for completion of the RFD/RFW.
 - E.5.1 Block 1. Date. Enter the submittal date.
 - E.5.2 <u>Block 2. Procuring activity number</u>. To be used by Government for entry of internal processing number if desired.
 - E.5.3 <u>Block 3. DODAAC</u>. Enter the DODAAC of the procuring activity.
 - E.5.4 <u>Block 4. Originator name and address</u>. Enter the name and address of the contractor or Government activity submitting the request. Use Block 4a for the contractor or Government activity name (inclusion of submitting individual's name is optional). Use Block 4b for the contractor or Government activity address.
 - E.5.5 <u>Block 5.</u> <u>Deviation or waiver</u>. Enter an "X" in the appropriate box.
 - E.5.6 Block 6. Classification. The deviation or waiver shall be designated minor, major, or critical in accordance with the definitions in 5.4.3.3 or 5.4.4.3 by entering an "X" in the appropriate box. When short form procedure is specified by contract, the Government representative identified in the contract will make this determination.
 - E.5.7 Block 7. Designation for deviation/waiver.
 - E.5.7.1 <u>Block 7a. Model/Type</u>. Enter model or type designation of the CI for which this request is being submitted. For CSCIs, enter the CSCI identification number.
 - E.5.7.2 <u>Block 7b. CAGE Code</u>. Enter the CAGE Code for the activity originating the deviation/waiver.
 - E.5.7.3 <u>Block 7c. System designation</u>. The system or top level CI designation or nomenclature assigned by the Government shall be entered, if known.
 - E.5.7.4 <u>Block 7d. Deviation/Waiver number</u>. Deviation/waiver identification numbers shall be unique for each CAGE Code identified activity. Contractors shall include the letter "D" as part of the deviation number or the letter "W" as part of the waiver number. Once a number is assigned, that number shall be retained for all subsequent submissions. Unless otherwise authorized by the Government, deviations and waivers shall be separately and consecutively numbered commencing with number one. As an alternative, numbers may be assigned from a separate series

MIL-STD-973 INTERIM NOTICE 3 (DO) APPENDIX E

for each system that the contractor is producing. The number of characters in the deviation/waiver number, dash number, and type identification shall not exceed 15.

- E.5.8 <u>Block 8. Configuration baseline affected</u>. Check the applicable box for the affected baseline. When short form procedure is specified by contract, the Government representative identified in the contract will make this determination.
- E.5.9 Block 9. Other system/configuration items affected. Check applicable box. If yes, provide summary data in Block 20. When short form procedure is specified by contract, the Government representative identified in the contract will make this determination.
- E.5.10 <u>Block 10. Title of deviation/waiver</u>. Enter a brief descriptive title of the deviation or waiver.
- E.5.11 <u>Block 11. Contract number and line item</u>. Enter the complete contract number and line item.
- E.5.12 <u>Block 12. Procuring contracting officer</u>. Enter the procuring contracting officer's name, code and telephone number applicable to the CI shown in Block 15.
- E.5.13 <u>Block 13. Configuration item nomenclature</u>. Enter the Government assigned name and type designation, if applicable, or authorized name and number of the CI to which the deviation or waiver will apply.
 - E.5.14 Block 14. Classification of defect (CD).
- E.5.14.1 <u>Block 14a. CD number</u>. If either a Government or contractor's CD applies, enter the number assigned.
- E.5.14.2 <u>Block 14b. Defect number</u>. If a CD applies, enter the defect number(s) which correspond(s) with the characteristic(s) from which an authorized deviation or waiver is desired.
- E.5.14.3 <u>Block 14c.</u> <u>Defect classification</u>. If a CD applies check the box which states the proper classification of the defect number(s) entered in Block 14b.
- E.5.15 <u>Block 15. Name of lowest part/assembly affected</u>. An appropriate descriptive name of the part(s) shall be given here without resorting to such terms as "Numerous bits and pieces".

MIL-STD-973 INTERIM NOTICE 3 (DO)

APPENDIX E

REQUEST FOR DEVIATION	I/WAIVER (RFC	D/RFW)	1. 0.		muu,	,		OMB No			
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Last)							6. (X one)	T	MINOR	
DESIGNATION FOR DEVIATION/WAIVER	<u> </u>		B. BA	SELINE A	FFECT	ED				CONFIGI	
MODEL/TYPE b. CAGE CODE	c. SYS. DESIG. d. DE	VWAJVER NO.	'	TUNC: NONAL		CATED		,	TEMS	AFFECTEI	
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	b. CODE				LEPHO	LIE V	O.				
3. CONFIGURATION ITEM NOMENCLATUR	14. CLASSIFICATION OF DEFECT				EEE/7 -	CLAF	LIGICATIO	NA .			
		a. CD NO.	0. DEF	ECT NO.	السا	MINOR		MAJOR	‴r	CRITICAL	
S. NAME OF LOWEST PART/ASSEMBLY A	AFFECTED	<u> </u>	16 P	ART NO.	OR T					1	
D. NAME UT LUTTED! FAR!/ADDEMBLT A	71124120		'''		 '		J. 417				
7. EFFECTIVITY			L		18.	RECUR	UNG	DEVIATION	DN/W	AIVER	
						YES		NO .			
I. EFFECT ON INTEGRATED LOGISTICS SU 2. DESCRIPTION OF DEVIATION/WAIVER	IPPORT, INTERFACE OF	R SOFTWARE									
13. NEED FOR DEVIATION/WAIVER									. 		
14. CORRECTIVE ACTION TAKEN											
				·/······							
25. SUBMITTING ACTIVITY	15 717.5			C SIGN	A T1 14) [
a. TYPED NAME (First, Middle Initial, Last)	b. TITLE			3.0.		νε					
26. APPROVAL/DISAPPROVAL 8. RECOMMEND		APPROVAL DISAPPROVAL									
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DD Form 1694, APR 92

Previous editions are obsolete.

Figure 10. Request for Deviation/Waiver REPRINTED WITHOUT CHANGE

MIL-STD-973 INTERIM NOTICE 3 (DO) APPENDIX F

INSTRUCTIONS FOR PREPARATION OF SPECIFICATION CHANGE NOTICE

F.1 GENERAL

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- F.1.1 <u>Scope</u>. This Appendix establishes uniform requirements for preparing the "Specification Change Notice". This Appendix is a mandatory part of the standard. The information contained herein is intended for compliance.
- F.1.2 <u>Application</u>. The SCN shall provide the information required by this Appendix. The SCN should only state the exact change proposed to the specification.

F.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

F.3 DEFINITIONS

F.3.1 <u>Definitions used in this Appendix</u>. For purposes of this Appendix, the definitions contained in Section 3 of this standard shall apply.

F.4 GENERAL REQUIREMENTS

- F.4.1 <u>Application</u>. Paragraph 5.4.6 identifies situations under which an SCN is required.
- F.4.2 DD Form 1696. DD Form 1696, Figure 11, is not a requirement of this standard, and is provided for reference only. SCNs shall be prepared in contractor format, containing the information required by this Appendix in Block Number sequence.
- F.4.3 <u>Pages affected by this SCN and previously changed</u>
 <u>pages</u>. The SCN shall clearly show those specification pages
 affected by this SCN, and those specification pages affected by
 previously submitted SCNs.

MIL-STD-973 INTERIM NOTICE 3 (DO) APPENDIX F

F.5 DETAILED REQUIREMENTS. Detailed instructions for completion of the SCN.

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- F.5.1 Block 1. Date. Enter the submittal date of the SCN.
- F.5.2 <u>Block 2. Procuring Activity No.</u> To be used by Government for entry of internal processing number, if desired.
- F.5.3 <u>Block 3. DODAAC</u>. Enter the DODAAC of the procuring activity.
- F.5.4 Block 4. Originator name and address. Enter the name and address of the contractor or Government activity which is preparing the SCN. Use Block 4a for the contractor or Government activity name (inclusion of submitting individual's name is optional). Use Block 4b for the contractor or Government activity address.
- F.5.5 <u>Block 5. SCN type</u>. Indicate by an "X" in the appropriate block if this is a proposed SCN. If the SCN is being submitted to the Government for final technical approval, prior to distribution according to the contract, both blocks should be left blank. The approved block will be marked by the Government upon approval/contractual implementation.
- F.5.6 <u>Block 6. CAGE Code</u>. Enter the CAGE Code of the design activity for the specification identified in Block 7.
- F.5.7 <u>Block 7. Specification number</u>. Enter the identification number, including revision letter, of the specification being changed.
- F.5.8 <u>Block 8. CAGE Code</u>. Enter the CAGE Code of the activity preparing the SCN.
- F.5.9 <u>Block 9. SCN number</u>. Enter the identification number for the SCN being submitted. SCN numbers are issued sequentially for each specification and revision, starting with the number "1".
- F.5.10 <u>Block 10.</u> System designation. Enter the type, model, series (or the nomenclature number) for the system (or major item of equipment, if it is not a system) affected.
- F.5.11 <u>Block 11. Related ECP number</u>. Enter the complete ECP number (including dash numbers and revisions) that identifies the related engineering change.

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- F.5.12 <u>Block 12. Contract number</u>. Enter the complete contract number(s) affected by this SCN, if applicable.
- F.5.13 <u>Block 13.</u> <u>Contractual authorization</u>. There should be no entry in this block on a proposed SCN. For the approved SCN only, enter the number of the contract modification document used to contractually implement the change. If a unilateral change order is utilized for initial authorization, it's number shall be entered in this block.
- F.5.14 <u>Block 14.</u> <u>Configuration item nomenclature</u>. Enter the nomenclature (name and number) of the CI affected by the change. Normally, this will be different than Block 10.

F.5.15 Block 15. Effectivity.

- a. For hardware, enter the serial numbers of the items for which this SCN is effective. Usually this will include the applicable production line items plus items approved for a retrofit or modification program.
- b. For CSCIs, enter the revision or version of the CSCI to which the change applies. If a new version is warranted by the incorporation of this ECP, the new version number should be entered here.
- F.5.16 Block 16. Pages affected by this SCN. (Indicate deletions). The entries in this section (upper half) shall provide information about the pages affected by the SCN being submitted. Enter a listing of all pages being changed by this SCN and indicate whether the pages are being superseded or added (by entering an "S" or an "A" in the column) or deleted (by printing the word "deleted" after the page numbers so affected). A separate line should be used for each category of page change. Once the SCN has been approved by the Government, enter the approval date (from Block 18) in this block.

F.5.17 Block 17. Summary of Previously Changed Pages.

- F.5.17.1 <u>Block 17a. SCN number</u>. For all SCNs previously submitted, enter the identification number of each SCN starting with SCN number 1 at the top of the column.
- F.5.17.2 <u>Block 17b. Related ECP number</u>. Enter the identification number (including revision designator and dash numbers) of each ECP effected by each previously issued SCN against this specification revision.

MIL-STD-973 INTERIM NOTICE 3 (DO) APPENDIX G

INSTRUCTIONS FOR PREPARATION OF NOTICE OF REVISION

G.1 GENERAL

- G.1.1 <u>Scope</u>. This Appendix establishes uniform requirements for preparing "Notice of Revision". This Appendix is a mandatory part of the standard. The information contained herein is intended for compliance.
 - G.1.2 Application. See 5.4.7 for NORs applicability.
 - G.2 APPLICABLE DOCUMENTS

This section is not applicable to this Appendix.

G.3 DEFINITIONS

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- G.3.1 <u>Definitions used in this Appendix</u>. For purposes of this Appendix, the definitions contained in Section 3 of this standard shall apply.
 - G.4 GENERAL REQUIREMENTS
- G.4.1 <u>DD Form 1695</u>. DD Form 1695, Figure 12, is not a requirement of this standard, and is provided for reference only. NORs shall be prepared in contractor format, containing the information required by this Appendix in Block Number sequence.
- G.5 DETAILED REQUIREMENTS. Detailed instructions for completion of the NOR.
- G.5.1 <u>Block 1. Date</u>. Enter the submittal date of the NOR. Normally this date will be identical to the ECP submittal date.
- G.5.2 <u>Block 2. Procuring Activity No.</u>. To be used by Government for entry of interim processing number, if desired.
- G.5.3 <u>Block 3. DODAAC</u>. Enter the DODAAC of the procuring activity.
- G.5.4 Block 4. Originator name and address. Enter the name and address of the contractor or Government activity submitting the proposed NOR. Use Block 4a for the contractor or Government activity name (inclusion of submitting individual's name is optional). Use Block 4b for the contractor or Government activity address.

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- G.5.5 <u>Block 5. CAGE code</u>. Enter the CAGE code of the originator of the ECP.
 - G.5.6 <u>Block 6.</u> <u>NOR number.</u> Unless the use of a Government assigned number is prescribed, the originator shall either assign a number or enter the document number and new revision letter as the NOR number. When the requirement in the contract identifies the NOR by ECP number, the originator shall attach a dash number (i.e., xxx-1).
 - G.5.7 <u>Block 7. CAGE Code</u>. Enter the CAGE Code of the original design activity which appears on the document to which the revision applies (See Block 8). If the original design activity is not the current design activity, also enter the CAGE code of the current design activity in Block 13.
 - G.5.8 <u>Block 8. Document number</u>. Enter the number of the drawing, standard, list or other document(s) to be revised.
 - G.5.9 <u>Block 9. Title of document</u>. Enter the title of the document to which the NOR applies.
 - G.5.10 Block 10. Revision letter.
 - G.5.10.1 <u>Block 10a. Current</u>. Show the existing revision of the document for which the NOR is prepared.
 - G.5.10.2 <u>Block 10b.</u> <u>New.</u> Show the revision letter proposed for the revision covered by the NOR. Usually the new letter will be the one following the current letter in alphabetical sequence, unless there are known outstanding NORs which may not have been incorporated.

NOTE: The Government may change the new revision letter proposed by the contractor in order to retain a proper sequence of approved revisions.

- G.5.11 <u>Block 11. ECP number</u>. Enter the number of the ECP describing the engineering change which necessitates the document revision covered by this NOR.
- G.5.12 <u>Block 12.</u> <u>Configuration item (or system) to which ECP applies</u>. Enter Government assigned system designation (if any); otherwise, enter the name and type designation of the CI to which the ECP applies (see Blocks 8a, 8c and 16 on ECP Form 1692).
- G.5.13 <u>Block 13.</u> <u>Description of revision</u>. Describe the revision in detail, giving the exact wording of sentences or

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

- 1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
- 2. The submitter of this form must complete blocks 4, 5, 6, and 7.
- 3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBE MIL-STD-973,	R INT NOTI	CE 3	. DOCUMENT DATE (YYMMDD) 13 JAN 1995	
B. DOCUMENT TITLE CONFIGURATION MANAGEMENT					
I. NATURE OF CHANGE (Identify paragraph r	number and include pro	posed rewrite	if possible. A	tach extra sheets as needed.)	
	-				
-					
5. REASON FOR RECOMMENDATION					
SURMITTER					
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Suite 1403

ADDRESS (Include Zip Code) 5203 Leesburg Pike

Falls Church, VA 22041-3466

IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:

5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466

Defense Quality and Standardization Office

Telephone (703) 756-2340 AUTOVON 289-2340