

Subject	Type Identifier	Standard
Configuration Management Flan	Effective Date Revision No.	May 2002
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Approval

CISSCO Program Director

# A. PURPOSE

This standard specifies the content and format requirements for the Configuration Management Plan (CMP).

## B. APPLICABILITY

This standard applies to all NRC projects/tasks, subject to the SDLCM Methodology.

# C. REFERENCE PUBLICATIONS

The following publications contain related information:

• SDLCM Methodology Handbook

### D. STANDARD

The Configuration Management Plan (CMP) is a management document that identifies the organization that performs Configuration Management (CM) for the Project/Task. It is typically produced in a high level form during the early components of the SDLCMM process and is defined at a lower level of detail by the end of Component 3. The intended audience for the CMP is Senior NRC Management and all Project/Task personnel. The CMP describes the organizational structure, personnel resources, processes and procedures that are used to perform CM activities to ensure configuration (change) control, configuration reporting and auditing. Finally, the CMP identifies the internal milestones for each of the components of the development/maintenance process.

The CMP is related to the Project Management Plan (PMP) and the Software Development Plan (SDP) and may be developed as an appendix to the PMP or as a stand alone document.

The following paragraphs describe the content of each section of the CMP.

### 1. INTRODUCTION

#### 1.1 Background

Briefly states the purpose of the system to which this CMP applies.

### 1.2 Objectives

Provides an overview of the role configuration management in the Project/Task to which this CMP applies.

#### 1.3 Scope

Identifies the specific Project/Task to which this CMP is applicable as well as the configuration management aspects of the Project/Task, such as depth of configuration change control, reporting and auditing, and processes to be used. Identify other external influences and impacts, such as interfaces, customer needs, internal agency guidance, and regulatory requirements, to be addressed. Describe the work activities to be completed and the work products, reports, support libraries and audits to be delivered and/or maintained.

#### 1.4 Assumptions

Specify assumptions used to plan the configuration management effort for this Project/Task. Include resource constraints and commitments necessary to accomplish the configuration management objectives.

#### **1.5** Applicable Documents

Specify documentation used to support creation of the CMP, including applicable standards and process documentation.

Provide references to documents applicable to this CMP. Reference entries should contain sufficient information to positively identify the reference, e.g., by publisher or source; document number or other unique identifier (if any); title, version or release designator (if any); and date. Note, that any documents actually cited in the text should be listed in the references section at the end of the document.

#### 1.6 Overview

Discuss the organization and contents of the CMP. Describe each major section of the plan in terms of its basic content and relationship to the Project/Task.

Describe how the plan will be maintained during the life of the Project.

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## 2. APPROACH

Specify the planned approach to achieve the desired configuration management results and any Project management standards that will be used to control and monitor those results.

## 3. CONFIGURATION MANAGEMENT ORGANIZATION

Identifies the Project/Task CM organization.

### 3.1 Organizational Structure

Describes the Configuration Management organization and identifies relationships between the CM organization and other Project/Task organizations.

### 3.2 Responsibilities and Authority

Identifies the responsibilities and authority for CM in all participating groups and organizations. This material may be in text or table form.

### 3.3 CM Organization Identification

Identifies the composition of the Project/Task by name and/or title. The organizational relationship, including the extent of dependence or independence between the groups responsible for CM.

### 3.4 CM Policies and Directives

Identifies CM policies and directives to be implemented as part of this plan; specifies the degree of implementation.

#### 3.5 Software/Hardware CM Relationship

Specifies the relationships, if applicable, among the software and the hardware CM organizations.

### 3.6 CM Reporting

Specifies the formal and informal interfaces between CM and the overall NRC Project organization. Also specifies the policies and intervals of reporting status data, problem areas, and workarounds.

#### 3.7 CM Interface with Overall Project Manager

Specifies the formal and informal interfaces between CM and the Overall Project Manager.

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# 4. CONFIGURATION IDENTIFICATION

Defines the baselines, configuration items (CIs), and control and maintenance methods.

## 4.1 Configuration Item Identification

Defines the selection of CIs (as defined by the Overall Project Manager with input from the Technical Project Manager for SW CIs), including relationships to work breakdown structures. In addition, identification procedures are established for titling, labeling, numbering, and cataloging each CI. This section also describes how revisions to the CIs are identified.

## 4.2 Documentation Identification

Identifies documentation that provides the technical description of each CI (guidance documents and/or policy documents, specifications, drawings, and associated data). In addition, the procedures for titling, labeling, numbering, and cataloging the documentation are established. This section also identifies how revisions to the documents are identified.

### 4.3 Baseline Configuration Management

Identifies the configuration baselines that correspond to the product development cycle (requirements/functional, allocated/design, engineering, and release/operations) and the products constituting each baseline.

### 4.4 **Project Support Library**

Describes the Project/Task support library and associated procedures.

### 4.5 Identification Numbers

Describes the assignment of CI nomenclature and serial numbers.

### 5. CONFIGURATION CONTROL

Describes the methods used to process problem reports and change requests. In addition, this section defines levels of authority for change approval.

### 5.1 Depth of Control

Defines the depth of control and the interfaces for each controlled product; that is, the period of control and the degree of control applied during each period.

### 5.2 **Problem Report Processing**

Describes the format, processing, and submittal of Problem Reports.

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## 5.3 Change Request (CR) Processing

Describes the preparation, processing, and submittal of CRs.

#### 5.4 Request for Deviations and Waivers

Describes the format, processing, and submittal of Requests for Deviations and Waivers.

### 5.5 Implementation of Changes

Describes the methods that apply to Policy/Guidance Changes Notices, Version Description Document (Release Notice), Engineering Change Orders (ECOs), and ensuring the implementation of approved changes in all facets of the affected baselines.

#### 5.6 Change Control Boards

Defines the Change Control Board (CCB) and Technical Review Board (TRB) authorities and responsibilities.

### 5.7 Emergency Change Control

Describes the steps to be followed when changes are made in emergency situations.

### 6. SYSTEM CONFIGURATION AUTHENTICATION

Describes the process of verification for approved changes to the System CIs.

#### 6.1 Documentation Reconciliation

Describes the method of reconciling deliverable software with its approved documentation (that is, the capabilities matrix, documentation reviews, code walkthroughs, automated and manual traceability of functional requirements, etc.).

#### 6.2 **Product Identification**

Describes the methods for ensuring that the guidance/policy, software, documentation, and other artifacts have been properly identified.

#### 6.3 Change Incorporation

Describes the method for ensuring the incorporation of approved changes.

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## 6.4 Configuration Status Accounting Reconciliation

Describes the method of reconciling the configuration status accounting reports and the status of the software, documentation, and other materials with the approved baselines and approved changes.

# 7. CONFIGURATION STATUS ACCOUNTING

Describes the collection, recording, processing, and maintenance of the data necessary for generation of configuration status accounting records.

## 7.1 Status Accounting Input

Describes the formats and data elements for CM status accounting records and reports.

## 7.2 Status Accounting Reports

Describes the content and format of periodic summary reports to reflect the status of PRs and CRs as appropriate.

## 8. INTERFACE MANAGEMENT

Describes the plan for coordinating efforts involved in design and data management to ensure compatibility through interfaces with associated programs or Projects/efforts (that is, where two of more programs or Projects/tasks that are supported by or require sharing of information between their manual or automated processes).

# 9. CONFIGURATION MANAGEMENT REVIEWS AND AUDITS

Defines the role of the CM organization in reviews and audits.

### 9.1 Quality Assurance Measures

Describes the planned quality assurance measures that apply to CM.

#### 9.2 Reviews

Defines the CM role in reviews to be performed at specified points in the system development cycle.

### 9.3 Configuration Audits

Defines the CM role during Functional Configuration Audits (FCAs) and Physical Configuration Audits (PCAs); includes the following:

- Format for reporting results of in-process configuration audits and the plan for identification and resolution of problems occurring during these audits and reviews

- Plans and schedules for the conduct of CM audits

# 10. CONTRACTOR/VENDOR CONTROL

Presents the plan for maintaining control of contractors and vendors.

# 11. CONFIGURATION MANAGEMENT MAJOR MILESTONES

Identifies major CM-related milestones for the Project/Task phases.

# APPENDIXES