U.S. Department of Energy

Project Name

Configuration Management Plan

September 2002

TEMPLATE

U. S. DEPARTMENT OF ENERGY

Organizational Title 1
Organizational Title 2

Change Control Page

The following information is being used to control and track modifications made to this document.

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Title Page

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Approval:	_____ *name and organization*
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U.S. DEPARTMENT OF ENERGY

Organizational Title 1
Organizational Title 2

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Preface

Document Version Control: It is the reader's responsibility to ensure they have the latest version of this document. Questions should be directed to the owner of this document, or the project manager.

This document was generated by the ***PROJECT NAME*** project team. ***System/Project Name*** will be developed for the ***Organization Name*** of the U.S. Department of Energy.

Lifecycle Stage: ***Project Name*** is in the Planning stage of the project lifecycle.

Approval: A completed stage exit will constitute approval of this document.

Document Owner: The primary contact for questions regarding this document is:

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Privacy Information

This document may contain information of a sensitive nature. This information should not be given to persons other than those who are involved in the *Project Name* project or who will become involved during the lifecycle.

1. Introduction

1.1 Scope

The scope of the Plan encompasses the tasks of Software Configuration Management (SCM). The function of the section is to:

- Identify the specific SCM concerns
- Define what the plan will and will not address
- Identify the items to be managed

The definition and scope of each entity of the configuration item and the kind of control to be considered for each type of entity is also needed. A short description of relationships among configuration items may be appropriate. The boundary of the SCM activities may be described here with the help of graphics (block diagrams, tables, etc.) as necessary.

A SCM Plan is produced for most information systems projects. In cases where the project is small, the Project Plan may incorporate the SCM Plan.

1.2 Objectives

Describe the objectives of the SCM Plan. It is sufficient to write a brief paragraph identifying the system to which the particular SCM Plan applies, noting any dependencies on other SCM Plans.

The SCM Plan describes the plan for assuring that the project has adequate control over all items necessary for creating or supporting customer deliverables.

1.3 Background

Provide an overview of the project and product.

1.4 References

List the documents cited elsewhere in the plan.

1.5 Definitions

Capture all definitions needed for understanding the SCM Plan or helpful for communication.

2. Organization Configuration Management

Specify the organizational groups involved in the SCM process and describe the responsibilities of each group.

2.1 Roles and Responsibilities

Identify the organizational SCM tasks to be performed during the project and relate the tasks to the responsible organizational groups.

2.1.1 Configuration Control Board (CCB) Roles and Responsibilities

Identify the authorities needed for granting change approvals.

Describe the role of authorizing changes to baselines, configuration items and components. The purpose of the CCB is to control major issues such as schedule, function, and configuration of the system as a whole.

2.1.2 Interface Control

Define the roles and composition of the various CCBs and other activities and practices used for interface control. All types of interfaces should be considered including organization, phase, software and hardware.

2.1.3 Configuration Management Policy and Procedures

Identify and define the degree to which existing and future SCM policies and procedures apply to the plan.

2.1.4 Configuration Methodology, Tools, and Techniques

Describe any tools or techniques required for performing the SCM Tasks or that can be used to automate processes. For example, there may be tools to manage access to the library, to request changes, for status reporting, etc.

The tools, techniques and methods used to implement SCM are usually discussed in terms of a set of libraries and methods and techniques used to capture, store, and promote or release the items of each type of library in a controlled manner.

2.2 Resources

Describe the resources required for performing the SCM tasks. Plans can be included for obtaining required staff, hardware, software, office space, etc.

3. Project Configuration Management Tasks

Describe the tasks that are required to apply configuration management to the project.

3.1 Configuration Identification

Define what types of items will be controlled in the project, such as a software, hardware, documentation.

3.2 Configuration Items

List each software configuration item (CI), when it will be put under control, and the person or group responsible for each item.

- Software Configuration Items (SCIs)
- Hardware Configuration Items (HCIs)
- Documentation Configuration Items (DCIs)

3.3 Configuration Item Identifier

Define the scheme used to identify the CI, components and units. (i.e., filename, CI identifiers, labels, etc.).

- CI Identification Numbers
- Software Release and Version Identifiers

3.4 Baseline Management

Identify the product baselines. If more than one, show which CIs makeup each baseline. Describe when and how baselines are produced.

- Formal Baselines

An approved “version” of a software product and descriptive documents (e.g., requirements, design specifications, software).

- Internal Baselines

Baselines used within the project team for development and test before being approved and released to the customer.

3.5 SCM Repositories

Describe any tasks associated with using configuration repositories or libraries (i.e., submitting CI's, deleting CI's, reviewing CI's)

- Physical Repository
- Electronic Repositories

3.6 Support Software

Describe any special procedures for controlling support software (i.e., tools, drivers, test dates).

Support software is software which may or may not be delivered with a product, but yet is necessary for designing, enhancing, or testing the changes made during the life of a delivered computer program product.

4. Configuration Control

Describe how the configuration control process is managed. Identify the procedures used to process changes to known baselines. An appropriate level of authority for controlling changes must be identified or delegated for each baseline. Procedures for processing the requests for changes and approvals must be defined.

4.1 Change Control

Describe the mechanism for systematic evaluation, coordination, and approval or disapproval of proposed changes to the items under SCM. Include details of initiation, recording, review, approval, tracking and closure.

- Define the information needed for approving a change.
- Identify the routing of this information.
- Describe the control of the library(ies) used in processing the changes.
- Describe or refer to the procedure for implementing each change in the code, documentation, and released program(for example, field upgrades).

4.2 System Change Requests (SCRs)

SCRs are used to report problems, identify new or changed requirements, and suggestions for improvement. Include a sample of the form used. See Attachment 1, Software Change Request Form, and Attachment 2, Software Change Request Log, for example formats.

4.3 SCR Priorities

Describe the process for prioritizing changes as they are received.

4.4 System Release Management

Describe plans for releasing deliverables to the customers. Include developing a release procedure, instructions for preparing Version Description Documents, repository establishment and operation.

4.5 Version Control

Describe the process to control an identified and documented body of software. Identify the configuration management actions required for modifications to a version of software (resulting in a new version). A version description document identifies and describes what is contained in a version.

5. Configuration Status Accounting

Describe how information will be captured to anticipate common queries and provide the information in a form where it is easily accessed. Describe frequency and distribution of reports. Reports to be considered are:

- Configuration Items Detailed Status Report
- Configuration Items Change History
- Released Items Report
- Product Baseline Status Report
- Results of Audits

6. Configuration Audits and Reviews

This section describes any audits or reviews of the SCM process or library that will be conducted during the project (i.e., audit of product baseline, audit of configuration library, review of SCM plan).

6.1 Functional Configuration Audits

An inspection to determine whether the CI satisfies the functions defined in specifications. Consists of someone acknowledging having inspected or listed each item to determine it satisfies the functions defined in specifications.

6.2 Physical Configuration Audits

Consists of determining that all items identified as being part of configuration are present in the product baseline.

6.3 Peer Reviews/Structured Walkthroughs

Identify how the reviews will be used to validate the SCM approach, the configuration identification, change control, status accounting and auditing procedures for appropriateness to the project.

7. Archive and Retrieval

Describe the archive and retrieval processes. What items are archived and for how long.

8. Training

Describe the periodic or established training required for customers and project team.

Attachment 1

Software Change Request Form

Software Change Request (SCR) Form

Software Change Request (SCR) **Requirement #_____** **SCR#_____**

Originator:_____ **Date:_____** **Release#_____**

Type:

( ) New Requirement ( ) System Problem ( ) Suggestion for Improvement
( ) Requirement Change ( ) User Interface Problem ( ) Other:_____
( ) Design Change ( ) Documentation Correction

Priority:

( ) High ( ) Medium ( ) Low

Description:

Please attach supporting documentation for the requested change
(screen/report printouts, document pages affected, etc.)

Status	Approval Date	Initials/Comments
Reviewed & Estimated		
On Hold		
Canceled		
Approved for Change		
Code Updated		
Documentation Updated		
Completed		

SMR#_____

New Release#_____

Please attach supporting documentation for review & estimates (analysis, resource estimates, layouts, document pages affected, etc.)

Attachment 2

Software Change Request Log

Software Change Control Log

Page #: _____ **Log Date: ____/____/____**

System Name:

SCR #	Reqmnt #	Date Submitted	Priority (H,M,L) *	Approval			Status				
				Change Approved	Change Not Approved	Hold (Future Enhancement)	Technical Evaluation Phase	Change In-Progress	Canceled	Target Date	Date Complete

SCC Log V1.0 (8/8/99)

* H = High, M = Medium, L = Low (as defined by the SCR form).

See Reverse for Instructions

INSTRUCTIONS FOR COMPLETING THE SOFTWARE CHANGE CONTROL LOG

This change control log form is included as a suggested format for recording and maintaining software change request data, including changes to documentation. A Detailed Status Information form is available to record supplementary details. The log and software change requests should be maintained in the Project File.

FIELD	DEFINITION
Page #:	Enter the appropriate page number of the log sheet.
Log Date:	Enter the date control log was started.
System Name:	Enter the name and acronym of the system to be managed.
SCR #:	Enter the unique sequential number assigned to each request on the SCR form.
Reqmnt #:	Enter the number of the requirement to be changed (if known) on the SCR form.
Date Submitted:	Enter the date the SCR was submitted
Priority:	Enter the priority from the SCR form using the first character of the priority; i.e., **H** = **H**igh, **M** = **M**edium, and **L** = **L**ow.
Approval:	This area is for recording SCR approval information obtained from the SCR form.
Change Approved:	Enter the date the SCR was approved.
Change Not Approved:	Enter the date the SCR was not approved.
Hold (Future Enhancement):	Enter the date the SCR was placed on "Hold."
Status:	This area is for recording basic information about the status of a SCR.
Technical Evaluation Phase:	Enter the date the technical evaluation of the SCR commenced.
Change In-Progress:	Enter the date work began on the SCR. Usually, the areas "Technical Evaluation Phase" (if applicable) and "Change Approved" should be entered prior to posting the "Change In-Progress" date. Work on most SCRs should not be initiated without a technical evaluation and formal approval in the SCR.
Canceled:	Enter the date the SCR was canceled.
Target Date:	Enter the estimated date that the SCR will be completed and ready for release/implementation.
Date Complete:	Enter the actual date the SCR was implemented.

Software Change Control Log - Detail Status Information

Page #: _____ **Log Date: ____/____/____**

SCR #:	System Name:

SCC-DS Log V1.0 (8/8/99)

Note: Use this form in conjunction with the SCR Log form to record supplementary details about a given software change request. Include the appropriate Page # and SCR # from the SCR Log form to maintain a cross-reference between logs. Keep all logs with the SCR in the Project File.