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NATIONAL WASTE TERMINAL STORAGE PROGRAM

CONFIGURATION MANAGEMENT PLAN

VOLUME I

MANAGEMENT SUMMARY

MAY 1977

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**UNION
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OFFICE OF WASTE ISOLATION
OAK RIDGE, TENNESSEE

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THE OFFICE OF WASTE ISOLATION
UNION CARBIDE CORPORATION—NUCLEAR DIVISION

MAY 1977

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SECTION ONE

INTRODUCTION

1.1. BACKGROUND

The Configuration Management Plan defined in this volume is based on industry standard methodology and the Union Carbide Corporation, Nuclear Division (UCC-ND) procedure designed for use in uranium enrichment capacity expansion projects. This combination will provide the Office of Waste Isolation (OWI) with a standardized management discipline that is customized to the unique requirements of the National Waste Terminal Storage (NWTs) Program, yet maintains a high level of compatibility with the forms and procedures already familiar to UCC-ND.

1.2. OBJECTIVE

The objective of the Configuration Management Plan is to describe the Office of Waste Isolation's approach for the systematic identification, change control, status accounting, and auditing of:

- The documents defining the NWTs Program and the plans for attaining the defined objectives.
- The physical and functional characteristics of each storage site, facility, systems and equipment.
- The associated costs and schedules.

1.3 PURPOSE

The purpose of the Configuration Management Plan is to provide the management discipline through which the integrity and continuity of program cost and schedule trade-off decisions which are made concerning the site selections and facilities performance, producibility, operability and supportability are recorded, communicated, and controlled, by the Office of Waste Isolation. The plan also assures that all organizations are working toward common goals and that all organizations' interests are adequately represented when program changes are made.

1.4 SCOPE

The provisions of the configuration management discipline will originally apply to all OWI organizations and their contractors, sub-contractors and suppliers as applicable. Eventually, the scope may be expanded to include ERDA Headquarters and Oak Ridge Operations Office (ORO) and ERDA contractors as deemed appropriate.

1.5 RESPONSIBILITY

The prime responsibility for the eventual OWI Configuration Management System will rest with the Configuration Control Coordinator (CCC) and the Configuration Control Board (CCB).

1.5.1 CONFIGURATION CONTROL COORDINATOR

An individual within OWI will be designated as the Configuration Control Coordinator and will have the prime responsibility for the development, implementation, and operation of the eventual Configuration Management System.

1.5.2 CONFIGURATION CONTROL BOARD

The CCB will be made up of the OWI Department Managers and will be chaired by the OWI Director. The CCB will be responsible for the baselining of the key program elements and the approval of any subsequent changes.

SECTION TWO

PLAN DESCRIPTION

2.1 OVERVIEW

The planned OWI Configuration Management System, Figure 2-1, will be made up of four functions, namely: (1) Configuration Identification, (2) Configuration Control, (3) Configuration Status Accounting, and (4) Configuration Audit.

2.2 CONFIGURATION IDENTIFICATION

When a program element is designated for the application of the configuration management discipline, it will be documented in sufficient detail to facilitate identification of the appropriate control parameters (form, fit, function, costs, and schedules). This identification documentation will then be baselined by the CCB in accordance with the configuration baselining procedures. Any subsequent changes that affect the controlled parameters must be submitted to the CCB for approval prior to implementation. For example, a repository hot operation milestone might be designated for configuration control. The control parameter would be the schedule. Anticipated milestone steps would then require CCB approval before planning baselines could change.

2.2.1 CONTROL LEVELS

The level of configuration control is a variable for each configuration end item and the individual phases of the program. It will be a responsibility of OWI management to define the

Figure 2-1. Planned Configuration Management System

desired level of control for each baselined item, based upon various program requirements such as EPA and NRC criteria and regulations. The baseline documentation will become significantly more detailed with the progression of the program until such time as it reflects the level of control stipulated by OWI management.

Figure 2-2 portrays the possible progression of the facilities baseline. Originally, the configuration control could be applied to the baselined conceptual design criteria and progress to the Title I and Title II design criteria and the individual systems and equipment specifications. If required, the baselined configuration can be further controlled to the equipment drawings and manufacturing processes.

2.2.2 BASELINE PROCEDURE

Any OWI organization may propose a program element to be baselined. The organization will initiate a Baseline/Change Proposal (B/CP) and will be responsible for providing sufficient documentation to identify the proposed baseline element. This package will be submitted to the Configuration Control Coordinator who will make distribution to all other organizations and schedule the proposal before the CCB. On the scheduled date, the board will review the proposal and the members will make their recommendations to the Chairman. Based upon this review and the Board's recommendations, the Chairman will approve or disapprove the proposal.

2.3 CONFIGURATION CONTROL

Once a program element has been baselined, any subsequent changes will require the approval of the CCB.

2.3.1 CONFIGURATION CONTROL PROCEDURES

Any OWI organization will be able to propose a change to the controlled parameters (form, fit, function, cost, and schedule) of a configuration item. The originating organization will prepare a Baseline/Change Proposal defining the proposed change, its category (Cost Reduction, Design Improvement, etc.) and its priority (Routine or Urgent). The Change

INCREASED DETAIL AS PROGRAM MATURES

Figure 2-2. Facilities Baseline Progression Example

Proposal will be submitted to the CCC who will review it for completeness, distribute the B/CP to all OWI organizations, and schedule it before the CCB. Each organization will review the proposed change, quantify its impact in terms of cost and schedule, and transmit this information to the CCC. On the scheduled date, the CCB will review the proposed change and the total impact assessment provided by the CCC. The CCB members will provide recommendations to the Chairman, who will make the final approval/disapproval decision, provided it is within his scope of authority. In the event that the decision is beyond the authority of the OWI Director, he will direct that the change proposal package be submitted to the appropriate ERDA office for approval.

The CCC will distribute the proceedings of the meetings and make the appropriate entries into the status accounting records.

2.4 CONFIGURATION STATUS ACCOUNTING

Configuration Status Accounting will be primarily a record keeping function. The configuration item description and baseline documentation identification will be the original entries in the data base. Additional data such as Baseline/Change Proposal numbers and dates will be included.

After the initial entry, the status of the end item will be maintained in terms of proposed, in-process, and approved B/CP's authorization directives, scheduled date of change implementation, and the date of change incorporation. In addition, the revisions to the baseline identification documentation will be recorded.

2.5 CONFIGURATION AUDIT

The configuration audit function will be a Quality Assurance responsibility that ensures that the end item does meet the form, fit, and function descriptions contained in the baseline identification documentation, plus any approved and implemented changes.