



Westinghouse Electric Corporation
Advanced Technology Business Area

AP600

Program Operating Procedure

AP-3.6

Rev

2

Subject

AP600 Design Criteria Documents

Approved

H. J. Bruschi, General Manager
Advanced Technology Business Area

Effective Date

03-11-94

AUTHOR/COGNIZANT FUNCTION

Contact Manager, AP600 Plant Engineering, on questions concerning this procedure.

PURPOSE

This procedure establishes requirements for the preparation, review, approval and revision of Design Criteria Documents for the AP600.

SCOPE

This procedure applies to all AP600 Design Criteria Documents prepared by Westinghouse. AP600 contractors will prepare Design Criteria Documents in accordance with their own procedures using a format similar to that defined in this procedure.

DEFINITIONS

Design Criteria Document - A document defining requirements for design of specific aspects of the AP600. Typically these documents cover a single discipline or subdiscipline.

Design Criteria Manual - A Manual that incorporates the top level Design Criteria Documents.

Responsible Manager - The individual who identifies the need for a Design Criteria Document and is responsible for its preparation in accordance with this procedure.

Responsible Engineer - The engineer who is assigned to develop the Design Criteria Document.

PROCEDURE

General

- A. A Design Criteria Document is prepared to define criteria for use in subsequent design activities. It translates safety, licensing and contractual requirements into detail design requirements in order to assure a uniform design basis within all engineering activities.
- B. Design Criteria Documents are intended to provide mandatory requirements for subsequent design activities. The documents can be supplemented as required by design guides if guidance rather than mandatory requirements are to be defined.

- C. The initial issue and all subsequent revisions shall be prepared in accordance with the detailed procedure described below.
- D. A Design Criteria Manual will be compiled consisting of top level Design Criteria Documents. It will include documents prepared by Westinghouse under this procedure as well as documents, prepared by other AP600 contractors, reviewed and approved for project use by Westinghouse.
- E. Alphabetic revision symbols shall be used prior to placement of the criteria document under configuration control. Thereafter, numeric revision symbols shall be used. Revisions require change approval in accordance with the change control procedure (AP-3.2). The design change number shall be identified on the cover sheet. All technical changes shall be listed on the Record of Changes Sheet and shall be identified by a vertical line in the margin. The complete document will be reissued for each revision.
- F. Plant Engineering coordinates preparation and completion of the Design Criteria, coordinates AP600 Contractor preparation and review of Design Criteria Documents and assists in integration, review and approval cycles.

Responsibility

Action

Responsible Manager

- 1. Identifies need for a Design Criteria Document within his area of responsibility and define the scope of the document.
- 2. Assigns responsibility for the preparation of the Design Criteria Document.
- 3. Identifies interfacing organizations that will provide input, review and/or approve the Design Criteria Document.

Responsible Engineer

- 4. Prepares the Design Criteria Document utilizing the format and content guidelines identified in Appendix A.
- 5. Obtains a document number in accordance with the standard AP600 numbering system (GW GMP 005).
- 6. Ensures that all design inputs used in the preparation of the document are protected in accordance with the applicable records flow schedule.
- 7. Distributes copies of the draft document to reviewers and others, as required.

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|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Responsible Manager | 8. Assigns an independent verifier to verify the document. |
| Independent Verifier | 9. Reviews document for adequacy, correctness and completeness. |
| Interfacing Groups | 10. Review and comment on the draft document. |
| Responsible Engineer | 11. Resolves comments on the document generated during the review process. |
| | 12. Obtains required approval signatures on the cover and internal review sheet. |
| Responsible Manager | 13. Ensures that the Responsible Engineer has resolved comments with the verifier and mandatory reviewers and has obtained approval signatures on the sign-off sheet. |
| | 14. Reviews, approves and signs-off the Design Criteria Document. |
| Responsible Engineer | 15. Releases the Design Criteria Document to Program Control and Contract Administration. |
| Program Control and Contract Administration | 16. Distributes the Design Criteria Document as specified by the responsible engineer. Incorporates document in AP600 records. |
| Plant Engineering | 17. Identifies the top level criteria documents to be included in the Design Criteria Manual and identifies the distribution list for the Design Criteria Manual. |
| Program Control and Contract Administration | 18. Distributes the Design Criteria Documents selected for inclusion in the Design criteria Manual to the controlled distribution. |

REFERENCES

- A. AP-3.2, Design Configuration Change Control for AP600 Program, Phase 2
- B. GW GMP 005, AP600 Document Numbering

FORMS / EXHIBITS

- AP600 Document Cover Sheet - Exhibit 10
- AP600 Standard Internal Review Sheet - Exhibit 17
- AP600 Record of changes - Exhibit 16

APPENDICES

Appendix A Design Criteria Format and Content

APPENDIX A DESIGN CRITERIA FORMAT AND CONTENT

The Design Criteria Document shall be prepared using the following forms:

- AP600 Document Cover Sheet - in accordance with Exhibit 10
- AP600 Standard Internal Review Sheet - in accordance with Exhibit 17
- AP600 Record of Changes - in accordance with Exhibit 16

Subsequent pages shall include "AP600 Design Criteria Westinghouse Proprietary Class 2" in the header and the AP600 document number, revision number, page number and date in the footer.

The Design Criteria Document shall include a Table of Contents with the following sections:

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|------------|-----|--------------------------------------------------------------|
| Section | 1.0 | Introduction |
| | 1.1 | Purpose and Scope |
| | 1.2 | Background |
| | 1.3 | Definitions and Acronyms |
| Section | 2.0 | Codes and Standards |
| Section | 3.0 | and subsequent section numbers may be selected by the author |
| Section | | References shall be the last section |
| Appendices | | |

The Design Criteria Document shall define the criteria in sufficient detail that design of the plant in accordance with the criteria will meet all technical and licensing requirements. The document shall consider the following design inputs:

- a) Regulatory requirements. If the design criteria include any exceptions from Regulatory Guides, Standard Review Plans or other licensing documents, such exceptions shall also be documented in the "AP600 Compliance with SRP Acceptance Criteria" (GW GL 001).
- b) ALWR Utility Requirements. If the design criteria include any exceptions from the Utility Requirements Document, such exceptions shall also be documented in the "Comparison of AP600 Design with the Utilities Requirements Document".

Section 2.0 identifies the Codes and Standards imposed on the user of the criteria document, and is distinct from references which are provided in the last section to describe where requirements come from or to provide assistance to the user in understanding the criteria. In general, Regulatory Guides, Standard Review Plan sections and ALWR sections should be identified in the references and not in Section 2.0. AP600 requirements implementing the position should be incorporated in the body of the criteria document. Thus, any interpretation of the Regulatory or URD requirements is done by the Responsible Engineer for the Design Criteria Document and reviewed by all interfacing groups.