

1.0 Introduction

This document provides the Tier 1 material for the U.S. EPR. Tier 1 means the portion of the design-related information contained in a generic Final Safety Analysis Report (FSAR) that is approved and certified by the design certification rule. The Design Descriptions, Interface Requirements, and Site Parameters are derived from Tier 2 information. Tier 1 information includes:

- Definitions and General Provisions.
- Design Descriptions.
- Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC).
- Interface Requirements.
- Site Parameters.

The information in the Tier 1 portion of the FSAR is extracted from the detailed information contained in Tier 2. While the Tier 1 information must address the complete scope of the design to be certified, the amount of design information is proportional to the safety significance of the structures and systems of the design.

1.1 Definitions

Acceptance Criteria - the performance, physical condition, or analysis result for a structure, system, or component that demonstrates the design commitment is met.

Analysis - a calculation, mathematical computation, or engineering or technical evaluation. Engineering or technical evaluations could include, but are not limited to, comparisons with operating experience or design of similar structures, systems, or components.

As-built - the physical properties of a structure, system, or component following the completion of its installation or construction activities at its final location at the plant site. In cases where it is technically justifiable, determination of physical properties of the as-built structure, system, or component may be based on measurements, inspections, or tests that occur prior to installation, provided that subsequent fabrication, handling, installation, and testing do not alter the properties.

Basic Configuration (for a structure) - as labeled on associated figures, the arrangement of U.S. EPR standard structures that includes basic features such as building separations, decoupling gaps, relational building locations, certain room identifications, and external hazards barriers.

Design Description - the portion of the design that is certified.

Design Plant Grade - the elevation of the soil around the Nuclear Island assumed in the design of U.S. EPR.

Division (for electrical systems or equipment) - the designation applied to a given safety-related system or set of equipment that is physically, electrically, and functionally independent from other redundant sets of equipment.

Division/Train (for mechanical systems or equipment) - the designation applied to a given safety-related system or set of equipment that is physically, electrically, and functionally independent from other redundant sets of equipment.

Functional Arrangement (for a system) - the as-built physical arrangement of equipment to provide the service for which the system is intended and which is described in the Design Description.

Inspect or Inspection - visual observations, physical examinations, or reviews of records based on visual observation or physical examination that compares the structure, system, or component condition to one or more design commitments. Examples include walkdowns, configuration checks, measurements of dimensions, and nondestructive examinations.

Reconciliation - the reconciliation of deviations to the design. For components, it is provided as part of the QA Data Package. For piping, it is the reconciliation of deviations between the approved design and the as-built piping. For structures, it is the reconciliation of deviations between approved design and the as-constructed structure.

Test - the actuation or operation, or establishment of specified conditions to evaluate the performance or integrity of as-built structures, systems, or components, unless explicitly stated otherwise.

Test for Indication of a Display - to visually observe that the specified information appears on an operator workstation when summoned by the operator.

Type Test - a test on one or more sample components of the same type and manufacturer to qualify other components of that same type and manufacturer. A type test is not necessarily a test of the as-built structures, systems or components.