

Design Features in the Documented Safety Analysis and Technical Safety Requirements

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Design Features

- ❑ Identified in Hazard Evaluation or Accident Analysis in Documented Safety Analysis
 - Prevent or mitigate an accident
 - Provide a safety support function
 - Preserve an initial condition
 - Provide a significant contribution to defense in-depth
 - Provide safety function by the material properties of the design feature

- ❑ Developed in Chapter 4 of the DSA



Design Features

- Passive engineered features where the safety function is provided by the material properties of the structure or component
- Qualification must address the environments in which the Design Feature must function (thermal, humidity, seismic, etc.)



Design Features

- In-service Inspection (ISI)
 - Identified to detect degradation of a Design Feature so that preventative maintenance, or modifications, can be performed prior to the Design Feature not meeting functional requirements
 - ISI requirements, including frequency, established based on operating history, industry standards and manufacturer's recommendations



Design Features in Technical Safety Requirements

- Design Features carried forward to TSRs
 - The Functional Requirements and In-service Inspection of the Design Feature are repeated in the TSRs exactly as described in Chapter 4 of the DSA



Modification to Design Features

- ❑ All documents used to describe and qualify the Design Feature are referenced in the DSA and maintained in the configuration management (CM) system

- ❑ Changes to Design Features
 - Developed as a change package which includes changes to the DSA
 - Evaluated under USQ program to determine if risk factor increased requiring Pantex Site Office (PXSO) approval



Technical Safety Requirements Violations

Failure to initially qualify a Design Feature prior to operating under the DSA is a TSR Violation



Not Technical Safety Requirements Violations

- ❑ Failure to pass an In-service Inspection is not a TSR violation
- ❑ Failure to perform an In-service Inspection within the specified time is not a TSR violation
- ❑ Failure to meet the functional requirements of the Design Feature would be a degradation of an SSC, but is not a TSR violation
 - Evaluated under the USQ program as New Information
 - Reported under the Occurrence Reporting and Processing System (ORPS)

