

# NEI 96-07, Appendix D, Section 2.0: *Definitions*

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Application of Guidance Contained in Appendix D of NEI 96-07  
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# TODAY'S OBJECTIVES

- Respond to NRC Staff observations related to select definitions in Appendix D, Section 2
- Discuss other changes to Appendix D, Section 2
  - Proposed modification to the *Coping Analysis* definition
  - Proposed addition of a new definition
  - Proposed removal of several definitions
- Solicit feedback and invite questions from the NRC Staff regarding the definitions and proposed alternatives for select definitions provided in NEI 96-07, Appendix D

# NRC COMMENT #13

- NRC
  - Observation  $\Rightarrow$  No definition of *software*
  - Suggestion  $\Rightarrow$  Use definition of *software* provided in the referenced Shearon Harris Inspection Report
- Industry
  - Response
    - The referenced Inspection Report does not provide a “definition” of *software*, but indicates that the NRC considered CPLDs to contain *software*.
    - Appendix D, Section 1.2 and Definition 2.7 identify the scope of applicable SSCs, which includes *software*.
  - Proposed Resolution  $\Rightarrow$  A separate definition for *software* is not needed in a 50.59 implementation document.

# NRC COMMENT #20

- NRC
  - Observation  $\Rightarrow$  Inconsistent definition of *hazard analysis* (Definition 2.8)
  - Suggestion  $\Rightarrow$  Use definition consistent with Industry consensus
- Industry
  - Response  $\Rightarrow$  A definition of *hazard analysis* is not needed in a 50.59 implementation document.
  - Proposed Resolution  $\Rightarrow$  Remove Definition 2.8.

# NRC COMMENTS #21 & #22

- NRC
  - Observations
    - *Layers of Design* (Definition 2.10) and *Variety* (Definition 2.11) not used in NEI 96-07, Rev. 1
    - Difference(s) from diversity and defense-in-depth not clear
  - Suggestion  $\Rightarrow$  Expand definitions to explain difference(s) from diversity and defense-in-depth
- Industry
  - Response  $\Rightarrow$  Definitions of *layers of design* and *variety* are not necessary.
  - Proposed Resolution
    - Remove Definitions 2.10 and 2.11
    - Use of *diversity* and *defense-in-depth* is not appropriate due to the technical connotations associated with that terminology.

# MODIFICATION: *COPING ANALYSIS* (2.4)

- Basis for Proposed Modifications
  - Clarification
  - Focus on 50.59 implementation considerations
- Proposed Changes
  - Change the title to *Coping Strategies*.
  - Remove the implication that 50.59 is responsible for, is associated with performance of, or is involved with the determination of coping strategies.
  - Add the types of coping strategies that could exist from a 50.59 proposed activity perspective (i.e., physical, operational and analytical).

# NEW DEFINITION: *Sufficiently Low* (2.x)

- Source: NEI 01-01, Section 4.4.6, sub-section titled “Software Common Cause Failures”
- *Sufficiently Low*: “This phrase refers to the *magnitude* of the likelihood of a failure (e.g., a software common cause failure) that describes a likelihood of failure that is much lower than the likelihood of failures that are considered in the UFSAR (e.g., single failures) and comparable to other common cause failures that are not considered in the UFSAR (e.g., design flaws, maintenance errors and calibration errors).”

# NEW DEFINITION: *Sufficiently Low* (2.x)

## Reasons for the New Definition

- Replacement for *CCF Unlikely* and *CCF Not Unlikely*
- *CCF Unlikely* and *CCF Not Unlikely* are terminology for technical conclusions that are subject to change.
- NRC Staff has previously referred to this NEI 01-01 discussion as being a more appropriate licensing-based approach compatible with 50.59.
- Application will be in the Evaluation phase.



# OTHER DEFINITIONS TO BE REMOVED

- Deletions
  - CCF (Definition 2.1)
  - CCF Susceptibility Analysis (Definition 2.2)
  - CCF Unlikely/CCF Not Unlikely (Definition 2.3)
- Reasons for removal
  - These definitions are not needed in a 50.59 implementation document.
  - The technical intent, process and guidance associated with these definitions are subject to change.

# BASIC DEFINITIONS

- Accident
  - Source: NEI 96-07, Rev. 1, Definition 3.2
  - Definition: “...a design basis accident or event described in the UFSAR...typically analyzed in Chapters 6 and 15...”
- Malfunction
  - Source: NEI 96-07, Rev. 1, Definition 3.9
  - Definition: “...the failure of SSCs to perform their intended design functions described in the UFSAR...”

# QUESTIONS / COMMENTS / FEEDBACK

