

Draft Comment Summary

(Summary of Sample Draft Comments on Appendix D)

The NRC is currently finalizing its comments on Draft Revision 0 of Appendix D and binning them into major categories of consistency, technical approaches and methodology, and other concerns. Below are a summary of significant draft comments.

Consistency	
Consistency w/ NEI 96-07	The guidance in Appendix D has extended the use/meaning of terms used in NEI 96-07 (e.g., fundamental change). In addition Appendix D proposes some guidance that conflicts with the guidance in NEI 96-07 (e.g., whether a digital upgrade to a safety system is adverse and requires a LAR).
Adverse Change	In certain cases, Appendix D appears to be relaxing (i.e., is an adverse change from) NEI 96-07; for example, guidance is provided to bound an AOO with a previously existing accident. Since fuel design limits must be maintained for all AOOs, and Accidents allow fuel damage, any new AOO would be bounded by some accident; this is clearly not the intent of NEI 96-07.
Form & Content	Appendix D is intended to augment and supplement NEI 96-07 Revision 1 for digital I&C modifications; NEI should update Appendix D to follow the same form as NEI 96-07, so as to make the concurrent use of these documents easier (i.e., Form). In addition, the comments include certain suggestions for additional material (i.e., Content).
Internal Consistency	Appendix D is not always internally consistent. For example, two different examples provide different explanation of whether information presentation can cause an accident. NEI should verify consistency or explain differences.
Consistency w/ Other Guidance	The position taken is inconsistent with a position in other guidance. For example, Appendix D says that a Commercial Grade Dedication (CGD) is "equivalent to compliance with the regulatory guidance and industry standards normally applicable to safety-related digital," while NRC guidance document say the software development process must be considered as part of CGD. NEI should verify consistency or explain deviations.
Technical Approaches & Terminology - The NRC Staff's concern with terminology was expressed in Issue No. 1.	
Inconsistent Terminology	There are new terms used (e.g., Variety, Layers of Design), and it is not clear how these new terms are consistent with existing guidance. In addition several terms are defined differently than in other guidance (e.g. Common Cause Failure, Accident). NEI should update terminology to be consistent with current consensus terminology or justify and explain relationship and differences with current terminology.
CCF Unlikely & Not Unlikely	This concern is in part a concern with new terminology, but it is mostly a concern with the conceptual framework for demonstrating that a design has sufficient diversity (i.e., the analysis methodology of postulating CCFs). A change that would reduce system/equipment redundancy, diversity, separation or independence may require a LAR per NEI 96-07 Section 4.3.2, Example No. 6. The NRC Staff's concern with the CCF Characterization in NEI 01-01 was expressed in Issue Nos. 5 and 9.
Coping and Susceptibility Analysis	Most Safety Analysis Reports (SARs) do not include either a Coping Analysis or a CCF Susceptibility Analysis for analog I&C; therefore, their use in the implementation of digital technology may need to be considered as a new technical methodology) when evaluating if modification requires a LAR. Furthermore, agreement must be reached on how these analyses should be treated in the screening and evaluation processes.
Other Concerns - technical concerns not addressed	
HSI	The prior NRC comments on NEI 01-01 did not include HIS concerns, however, Appendix D provides new HIS related guidance which requires a thorough review, for example, it is not clear how the screening and evaluation processes deals with errors of cognition that arise from changes to HIS / I&C (such as confusion in operators caused by bottlenecks / delays that occasionally occur in from digitally processed signals).
Cyber Security	The NRC Staff's concern with the Security Considerations in NEI 01-01 was expressed in Issue No. 4. Appendix D has no guidance on licensing aspects of cyber security (e.g., under applicability).
Operating Experience	The NRC Staff's concern with operating experience in NEI 01-01 was expressed in Issue No. 3. It is not clear how the new guidance will reduce the types of errors seen in the implementation of NEI 01-01.