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CP&L

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Chief, Rules and Directives Branch
Division of Administrative Services
Office of Administration
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Subject: **Request for public comment on NUREG-1606, *Proposed Regulatory Guidance Related to Implementation of 10 CFR 50.59 (Changes, Tests, or Experiments)***

Dear Sir/Madam:

Carolina Power & Light Company's (CP&L) response to the Nuclear Regulatory Commission's (NRC) May 7, 1997 request for public comment on the proposed guidance for implementation of 10 CFR 50.59 is attached to this letter.

CP&L understands the importance of ensuring that changes do not adversely affect the safe operation of nuclear facilities. We also recognize the difficulty in defining exactly what changes can be made without prior Commission approval. Therefore, CP&L requests the NRC to work closely with the industry and the Nuclear Energy Institute (NEI) to refine the current NEI publication 96-07, *Guidelines for 10 CFR 50.59 Safety Evaluations* or the draft NUREG 1606.

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Please contact me at (919) 546-6901 if you have questions. Id PII Guides/Manual

Sincerely,

D. B. Alexander

D. B. Alexander, Manager
Performance Evaluation & Regulatory Affairs

DMM
Attachment

Request for public comment on NUREG-1606
Proposed Regulatory Guidance Related to
Implementation of 10 CFR 50.59 (Changes, Tests, or Experiments)

General Comments

1. If the NRC adopts the NUREG proposed language, a significant increase in the number of Unreviewed Safety Questions (USQs) submitted to the NRC is anticipated. This will expend licensees' and the NRC's resources to resolve matters that could have little or no impact on protecting the health and safety of the public. NEI has provided commentary to the NRC that includes examples of how the NUREG proposed language could adversely affect safe operation of nuclear power plants. CP&L urges the NRC to consider these examples.

2. Regarding Section IV, Policy Issues, CP&L does not recommend issuing a rule change to 10 CFR 50.59. CP&L urges the commission to work with the industry and the NEI in developing a version of NEI 96-07 or NUREG 1606 that is acceptable for implementing 10 CFR 50.59 as written. Application of the rule, with minor exceptions, has proven effective and safe in industry practice.

3. CP&L requests the NRC to clarify the relationship of licensee programs which implement 10 CFR 50.65 (Maintenance Rule) and the requirements of 10 CFR 50.59. The Maintenance Rule, in addition to licensee on-line maintenance programs and Appendix B to 10 CFR 50, provide the mechanism for safely performing maintenance activities, including the review of the impacts of removing equipment from service without the need for applying 10 CFR 50.59. Licensee approved plant operating and maintenance procedures, which have been evaluated under 10CFR50.59, provide for the safe implementation of no-line maintenance activities.

Specific Comments

1. Section III A.4 (a) Definition of Change

"The staff has interpreted "change" to include any modification or replacement of something, whether temporary or permanent, with something that is not identical to the original in design requirements."

The NRC should clarify that a "change" does not include modifications or replacements that are equivalent to, or exceed, the "design basis requirements" versus *"design requirements."* A *"change"* for the purpose of 10 CFR 50.59 should be limited to a change in design basis requirements as not all *"design requirements"* are part of the licensing basis. For example, a design requirement may be a procurement specification that specifies a minimum yield strength for a material. The design basis requirement may state that the yield strength for the material is to equal or exceed a lesser value than that specified in the procurement document. A subsequent

Request for public comment on NUREG-1606
Proposed Regulatory Guidance Related to
Implementation of 10 CFR 50.59 (Changes, Tests, or Experiments)

change to the yield strength that remains equal to or greater than that specified in the design basis should not be considered a "change" under 10 CFR 50.59.

The language also conflicts with the accomplishment of routine industry practice regarding procurement and maintenance activities as described in American National Standards Institute (ANSI) N18.7-1972, *Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants*. Routine procurement of replacement components for obsolete and/or unavailable items with functionally equivalent replacements (e.g., purchased to specifications and codes equivalent to those specified for the original design, or approved revisions thereto, and which do not adversely impact associated interfaces, interchangeability, safety, fit and function, and are not contrary to applicable codes) would be impaired to the detriment of safety.

2. Section III A.4 (c) Definition of Change

". . . the licensee needs to consider questions including, but not limited to the following: . . . (c) whether equipment is disabled, or a system, structure or component (SSC) is removed from service for maintenance that is part of the licensing basis but that is not addressed by TS Limiting Conditions for Operation (unless the effects were previously considered in the SAR or safety evaluation report (SER)"

This text should be clarified as it implies that a 10 CFR 50.59 evaluation is required to remove components from service for routine maintenance. Licensee approved plant operation and maintenance procedures, which have been evaluated under 10 CFR 50.59, provide for the safe implementation of on-line maintenance activities. Such activities are provided to return the plant to its originally designed configuration and state, and do not change plant configuration.

In addition, licensee programs established in response to 10 CFR 50.65, *Requirements for monitoring the effectiveness of maintenance at nuclear power plants*, the "Maintenance Rule", provide that equipment important to safety, that are removed from service for maintenance, are evaluated for affects on safe plant operation.

3. Section III.D.4 Definition of Test or Experiment

"The staff considers a test or experiment to be a special procedure for a particular purpose or an evolution performed to gather data."

This definition is too broad and would include activities such as taking voltage readings or Maintenance Rule data collection, both of which could be non-intrusive to the system. Additional clarification from the staff providing consideration for such activities is necessary.

Request for public comment on NUREG-1606
Proposed Regulatory Guidance Related to
Implementation of 10 CFR 50.59 (Changes, Tests, or Experiments)

4. Section III.E Definition of "as described," paragraph 2

"...the information in the FSARs that presents the purpose, quality, kind, number, condition, function, operation, use, design, or material of systems, structures or components..."

The words "*quality*" and "*kind*" are vague, thus subject to broad interpretation. Removal of these terms from the text would not detract from the overall intent. Also, the term "*use*" is of concern from a maintenance standpoint since this could imply that a "standby" component could not be put into service while the "normally operating" component is taken out of service for maintenance. Additional clarification is requested.

5. Section III.I.4 NRC Position or Guidance, paragraph 1

"The staff believes that a more complete definition of "malfunction" than what is contained in NSAC-125 is an undesired response of equipment, for example, failure to operate, inadvertent operation, operation in an unexpected manner, operation with less than rated capacity, and failure to perform function as designed."

CP&L suggests the following clarification: *The staff believes...an undesired response of equipment* which may adversely effect the performance of a safety-related structure, system or component. Examples of adverse effects include *failure to operate, inadvertent operation..."*

In addition, use of the phrase "*operation with less than rated capacity*" is overly restrictive in that the design basis requirement for capacity may be less than the rated capacity of the installed component. A reduction in rated capacity therefore can be allowed while still maintaining the approved design basis requirement. CP&L suggests modifying the phrase to "operation at a rated capacity less than the design basis requirement."

CP&L also requests that the NRC clarify this issue with respect to Generic Letter 91-18, *Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability.*

6. Section III.I.4 NRC Position or Guidance, paragraph 5 and 6

"In considering malfunctions of equipment, the staff would recommend that this be done at the component level. However, for some SSC, the evaluation of malfunctions discussed in the SAR may well have been only at the train or overall system level. . . ."

Request for public comment on NUREG-1606
Proposed Regulatory Guidance Related to
Implementation of 10 CFR 50.59 (Changes, Tests, or Experiments)

"For example, if a pressure transmitter using mechanical linkage is replaced with an oil-filled transmitter, oil loss is now a failure mechanism which might result in a type of failure at the output of the transmitter that did not exist previously, and therefore was never analyzed. This is a new type of malfunction, and should need staff review."

In many cases, new failure modes should be considered at the system or sub-system level, not the component level. Engineering judgment should be permitted to make these determinations.

7. Section III.M.4 Role of PRA in Section 50.59 Evaluations

"With respect to more traditional topics where PRA was not used in the licensing basis, PRA results and risk insights would play no direct role in the evaluation of potential unreviewed safety questions. However, information regarding changes in initiating event frequencies and equipment reliability estimates can be used in answering the 10 CFR 50.59 questions related to unreviewed safety question determinations. Further, information underlying the PRA models can be used to address the 10 CFR 50.59 questions relating to new accidents and accident consequences."

CP&L agrees that the maturity level of PRA today is not to the level at which PRAs can be used solely to determine the existence of an unreviewed safety question (USQ). Additionally, CP&L is concerned that using the PRA to answer the 10 CFR 50.59 questions related to USQ determinations could result in an inappropriately high number of USQs since there is no threshold assigned to define when a change is actually significant. The guidance would be more useful if a threshold were adopted, such as that defined by EPRI PSA Application Guide TR-105396, dated August 1995.

8. Section III.N Licensee Practice of Deleting Information from Safety Analysis Reports

"The staff position is that licensees may not remove material from safety analysis reports unless the material is changed as a result of a change to the facility."

The stated position is overly conservative in that typical safety analysis reports (SAR) contain information that is not related to safety or no longer valid beyond initial plant construction. Licensee efforts to improve the conciseness and retrievability of design basis information by deleting superfluous information from the SAR would be unnecessarily hampered by focusing licensee attention on matters not related to safety. Licensees should be allowed to delete information that: 1) does not strengthen or enhance the description or design basis of a safety-related structure, system or component; 2) impact the reliability and accuracy of any future safety

evaluations or unreviewed safety question determinations; or 3) relieves licensee burden of maintaining inessential information.

CP&L requests that the NRC identify the appropriate vehicle for removing unnecessary information from the SAR, if other than 10 CFR 50.59. In addition, the NRC should provide guidance on what information can, or cannot be, removed from the SAR and what requires further updating.

9. Section III.P Definition of Increase in the Probability of Occurrence

The staff position that the phrase "*may be increased*" implies that "*any increase, however slight, will trigger an unreviewed safety question*", and that "*...any uncertainty or doubt about whether an increase, even a negligible one, has occurred should lead to the conclusion that a USQ is involved*" is unnecessarily restrictive. The practice of engineering involves conclusions based on the use of assumptions, application of "average" parameters based on generally accepted codes and standards, or other use of scientific "judgment" involving uncertainties that result in conclusions in the SAR, or other design bases information, based on acceptable range of error, probability, or validity.

CP&L agrees that further clarification is needed and recommends the staff work with the NEI to clarify this issue. The current industry practice is described in NEI 96-07, Sections 3.4 through 3.6.

10. Section III.S & III.T Definition of Reduction in Margin of Safety, Information that Establishes the Basis for any Technical Specification

"Accordingly, for purposes of this criterion, a reduction of margin of safety as defined in the basis for any technical specification will be deemed to have occurred when an acceptance limit is no longer met as a result of a proposed change, test, or experiment. If the staff's acceptance limit in the safety evaluation is explicit, the licensees can consider the values in the staff safety evaluation as a reference for determining the "acceptance limit", rather than being limited only to values contained in the plant safety analysis report. If the staff's acceptance limit is not explicit, the "acceptance limit" is the value as reported in the SAR. . . . Thus, the staff concludes that other information, such as the SAR and supporting analyses, and the staff safety evaluation, should be reviewed in determining whether a margin of safety as defined in the basis for any TS has been reduced."

CP&L supports the application of NEI 96-07 in assessing possible reductions in margin of safety for proposed changes, tests or experiments. The NRC has previously promulgated a similar and

Request for public comment on NUREG-1606
Proposed Regulatory Guidance Related to
Implementation of 10 CFR 50.59 (Changes, Tests, or Experiments)

acceptable position in Inspection Manual (IM) Chapter 9900 regarding margin of safety and bases and concludes "*...licensees should use a combination of reasonable engineering practices, engineering judgment, and analytical techniques, as appropriate, in determining whether there is a decrease in the margin of safety.*" (IM 9900, page 5, paragraph 3)

11. Section III.V Consideration of Compensating Effects When Making an Evaluation of Whether an Unreviewed Safety Question Exists

The proposed language contradicts the NRC's position on compensating effects contained in Inspection Manual Part 9900. IM Part 9900 (page 3, paragraph 4) states "*In considering the acceptability of a licensee's 10 CFR 50.59 evaluation, the staff has found compensating effects such as changes in administrative controls acceptable in offsetting uncertainties and increases in the probability of occurrence or consequences of an accident previously evaluated in the SAR or reductions in a margin of safety, provided the potential increases or reduction in margin are negligible.*" This position is also consistent with industry practice as delineated in NEI 96-07.

CP&L recommends the NRC not revise its existing position as stated in IM Part 9900 when compensating effects are utilized to mitigate "negligible" increases in probability or reductions in margin of safety.

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Fax Sheet

To	Chief, Rules & Directives Branch Office of Administration	From	D.B. Alexander / D. Mosier
Company	Carolina Power & Light	Time	5:05 PM
Fax		Date	7/7/97
Subject	COMMENTS ON NUREG-1606	Page	1 of 8

(Message follows)

Attached please find CP&L's comments on NUREG-1606 published in the F.R. on May 7, 1997. Letter to follow today in U.S. mail.