RDB Received
8/25/04
SHoom

Duke Power®
A Duke Energy Company

HENRY B. BARRON
Group VP, Nuclear Generation and
Chief Nuclear Officer

Duke Power
EC07H / 526 South Church Street
Charlotte, NC 28202-1802

Mailing Address:
PO Box 1006
EC07H
Charlotte, NC 28201-1006

704 382 2200
704 382 6056 fax
hbarron@duke-energy.com

8/3/04
69 FR 46599
(2)

August 18, 2004

Chief, Rules and Directives Branch
Division of Administrative Services, Office of Administration,
U.S. Nuclear Regulatory Commission, Mail Stop T6-D59
Washington, DC 20555

Subject: Comments on Proposed Generic Communication, Draft Revision to NRC Inspection Manual Chapter 9900, "Technical Guidance," Operability Determinations and Resolution of Nonconformances of Structures, Systems, and Components" ("Regulatory Issue Summary 2004–XX")—(MC2262) 69 FR 46599 Dated August 3, 2004

Duke Energy Corporation (Duke) appreciates the opportunity to comment on the subject Draft Regulatory Issue Summary (RIS) and supports NRC efforts to update existing guidance documents and to clarify selected issues based on operating experience. Duke comments are provided in Attachment 1.

An overarching issue addressed in Attachment 1 regards the treatment of operability and corrective action. Duke believes that these concepts should be treated separately to ensure that operability determinations are focused on safety and are not delayed by decisions or actions necessary to plan or implement corrective action. In many cases, the draft RIS provides guidance from the corrective action perspective. This complicates the guidance with respect to operability and abates its ability to promote reasonable and consistent application among licensees.

Duke recommends that the NRC include a grace period on the effectiveness of the technical guidance when issued to allow licensees sufficient time to revise implementing documents and train personnel on the guidance.

Should you have any questions related to the attached comments, please call L. B. Jones at (704) 382-4753.

Henry B Barron

Henry B. Barron

Attachment

FREDS = ADM-03
Cc = K. Kavanagh (KAK)
C. Petrone (CDP)

Template = ADM-013

bxc:

R. L. Gill – EC05P
B. G. Davenport – ON03RC
C. J. Thomas – MG01RC
L. A. Keller – CN01RC
L. B. Jones – EC05P
M. A. Schoppman – NEI (e-mail)
ELL – EC05O

ATTACHMENT 1
Comments on Draft Regulatory Issue Summary Regarding Revision to Guidance Formally Contained in NRC Generic Letter 91-18

1.0 INTENT

This section should note that the guidance is not intended to be used as a means to justify actions which create degrading or nonconforming conditions. For example, it is inappropriate to purposefully breach a safety related ventilation controlled boundary and justify that breach using compensatory actions unless it can be verified that the ventilation system will continue to perform its specified safety function(s) and that all applicable Technical Specification requirements will continue to be met (Reference TIA 98008 and related correspondence).

This section states "The intent of operability determinations is for licensed operators to make timely determinations concerning whether SSCs can perform their specified function(s) upon discovery of degraded or nonconforming conditions." This sentence fails to recognize that the focus of operability is foremost on the capability to ensure that specified safety functions can be performed. The inability to perform a non-safety related specified function not included in the plant Technical Specifications should not require an operability determination. Rather, this type of condition should be addressed by the licensee's corrective action program in a manner consistent with the safety significance.

2.0 SCOPE/APPLICABILITY

Operability and corrective action are closely related concepts. However, they should be treated separately to ensure that the operability determination is focused on safety and is not delayed by decisions or actions necessary to plan or implement corrective action. Section 2.0 merges these two concepts together. This complicates the guidance with respect to operability and abates its ability to promote reasonable and consistent application. Section 2.0 should be rewritten to clearly state which SSCs are within the scope of operability.

For example, the list of SSCs in Section 2.0 is appropriate when viewed from a corrective action standpoint because 10CFR50 Appendix B requires corrective action whenever a degraded or nonconforming condition is identified. However, the list is too broad when viewed from an operability determination standpoint (e.g., not all SSCs subject to 10CFR50 Appendix B and not all SSCs that fall within the scope of the maintenance rule have safety functions). This is because the focus of operability is foremost on the capability to ensure that specified safety functions can be performed as required by the design and licensing basis and within the range of physical conditions for its safety mission and the required initiation time and duration. Non-safety functions should not fall within the scope of operability unless they are subject to the Technical Specifications explicitly or implicitly through the definition of operability or site manuals that contain relocated Technical Specifications (e.g., Technical Requirements Manual, Selected Licensee Commitments Manual).

Another example that accentuates the need to clearly define which SSCs are within the scope of operability involves item (viii), "Any SSCs within the scope of the Maintenance Rule (10CFR50.65). It is not clear if the scope is intended to be the 10CFR50.65(a)(4) scope or the section 10CFR50.65(b) scope. The 10CFR50.65(a)(4) scope includes those SSCs in the scope of the plant's level one PSA and those SSCs that have been determined to be high safety significant. The 10CFR50.65(b) scope includes all maintenance rule SSCs, including those SSCs that "could cause a reactor trip or safety system actuation." If the NRC expects an operability determination every time an SSC within the scope of 10CFR50.65(b) is degraded and/or nonconforming, then this would unnecessarily shift the focus of licensed operators from the safety of the plant to matters that could be handled without operator involvement in accordance with the plant corrective action program. This deviates from the intent of the guidance as stated in Section 1.0.

ATTACHMENT 1

Comments on Draft Regulatory Issue Summary Regarding Revision to Guidance Formally Contained in NRC Generic Letter 91-18

3.0 DEFINITIONS

3.1 Current Licensing Basis

The definition of current licensing basis comes from 10CFR54 which concerns license renewal. The NRC should clarify that this definition is also applicable to plants that have not renewed their plant operating license (Reference SECY-92-314 and related correspondence).

3.4 Functionally

This section introduces the term "designated functions" for SSCs not explicitly included in plant TS. What is the difference between "designated functions" and "specified functions?" Can designated functions be safety- and non-safety related? By introducing this new term, the NRC is creating confusion rather than clarifying the guidance. Furthermore, there is no specific guidance that addresses the timeliness of "functionality determinations" versus "operability determinations."

4.0 IDENTIFICATION OF DEGRADED OR NONCONFORMING CONDITIONS

4.1 Review Activities

This section states "Performance of the surveillance requirement is usually considered to be sufficient to demonstrate operability, provided that the system continues to conform to all appropriate criteria in the CLB." Clearly, an SSC does not need to conform to all criteria in the CLB to be operable. Therefore, the NRC should clarify what the term "appropriate criteria in the CLB" means with respect to operability. For example, the NRC should note that failure to conform to those CLB criteria not needed to demonstrate operability should be addressed by the licensee's corrective action program in a timely manner consistent with the safety significance.

This section also states "When any processes indicate a potential degraded or nonconforming condition, the plant must assess the operability of any affected SSCs." This statement is incorrect for SSCs that do not fall within the scope of operability. For the example, it is not necessary to perform an operability determination for non-safety non-risk significant SSCs that do not comply with all aspects of the CLB. If licensees were required to enter the operability process for such cases, it would unnecessarily cause licensed operators to shift their immediate and primary attention from the safety of the plant to matters that could be handled without operator involvement in accordance with the plant's corrective action program. This deviates from the intent of the guidance as stated in Section 1.0.

4.2 Degraded Condition

According to this section, a degraded condition is one in which "quality" has been reduced. If the NRC continues to use the term "quality" when describing a degraded condition, it should be defined. Sufficient detail should be provided to help licensees determine when an operability determination is required. For example, a loss of required quality could be defined as a loss of margin to the extent that required or necessary conservatism has been removed. SSCs within the scope of operability are designed and operated to include design margins and engineering margins of safety to ensure, among other things, that some loss of quality does not mean immediate failure. The CLB includes commitments to specific codes and standards, design criteria, and some regulations that also dictate margins. In many cases, conservatism was added so that a partial loss of quality does not affect commitments to the margins. The loss of conservatism not taken credit for in the safety analyses and not required to satisfy CLB requirements does not require a system to be declared inoperable. All other losses of quality or margins (i.e., losses of required quality) are subject to an operability determination and corrective action.

4.4 Fully Qualified

Previous NRC guidance noted that the Technical Specification definition of operable and operability specifically applies to SSCs covered by Technical Specifications and to those systems that fall within that definition. Furthermore, previous guidance noted that those same definitions are generally applied generically to other SSCs within the scope of operability – including those outside the Technical Specifications. It is not clear why the NRC would now take a different approach for SSCs not in Technical Specifications and suggest use of the term "functional" and related terms when assessing their ability to perform specified functions. Again, this appears inconsistent with the NRC's goal to simplify the guidance. Also, the guidance makes no distinction regarding the timeliness of "functionality determinations" versus "operability determinations."

5.0 OPERABILITY DETERMINATIONS

The focus of operability is foremost on the capability to ensure that specified safety functions can be performed as required by the design and licensing basis and within the range of physical conditions for its safety mission and the required initiation time and duration. Accordingly, this section appropriately states "Determinations of operability are appropriate whenever a review, TS surveillance, or other indication calls into question the SSC's ability to perform its specified safety function." However, in a subsequent paragraph, the term "functionality determinations" is introduced. As stated previously, it is not clear why the NRC would introduce a new term for SSCs not in Technical Specifications. Again, this appears inconsistent with the NRC's goal to simplify the guidance.

5.3 Prompt Determination

This section states "Subsequent to the immediate operability determination, a prompt operability determination should be made by licensed operators." Once an "immediate determination" is made, there may be no need to perform a "prompt determination." For example, there is no need to perform a "prompt determination" if the SSC is declared inoperable. Furthermore, a prompt determination should not be required if the "immediate determination" was based on existing information that was easily verifiable and that provided an adequate basis for the operability determination. Once a component or system is established as operable, it is reasonable to assume that the component or system should continue to remain operable, and the previously stated verifications should provide that assurance.

5.5 Circumstances Requiring Operability Determinations

The scope of SSCs listed in Section 2.0 and the circumstances requiring operability determinations are very broad. This accentuates the need to treat operability and corrective action separately. Without adequate separation, licensed operators will be tasked with making operability determinations for issues that have little or no safety significance. Of course, this will distract from their safety focus.

It is unclear why an operability determination should be performed upon discovery of an error in a design calculation or upon discovery of other nonconforming conditions that do not potentially affect operability. Such conditions should be addressed by the licensee's corrective action program in a manner consistent with the safety significance.

5.6 Scope of Determinations/Comparison to Current Licensing Basis

Nuclear power plants operate under many requirements. Some of these requirements are administrative, some are self-imposed, and some are obligations and commitments. The NRC should define the term "requirement" as they intend it to be used in the context of nonconforming conditions (Section 4.3) and the scope of operability determinations.

5.7 Presumption of Operability

The presumption of operability concept is an important concept and, in general, it is well understood. However, the examples provided in this section tend to obscure the concept rather than provide clarification.

6.0 OPERATIONS BASED ON OPERABILITY DETERMINATIONS

6.2 Operable But Degraded or Nonconforming

According to this section, "The prompt operability determination for the degraded or nonconforming condition, as documented per Section 5.8, essentially constitutes a basis for continuing operations. This evaluation should continue to be reviewed in an ongoing manner until corrective actions are successfully completed." While an ongoing review may be necessary in some situations (e.g., situations that involve the implementation of interim compensatory actions), without any information to the contrary, once a component or system is established as operable, it is reasonable to assume that the component or system should continue to remain operable, and the previously stated verifications should provide that assurance. Therefore, in many cases, an ongoing review is unnecessary and burdensome.

6.2.1 Operability and Corrective Actions to Restore Full Qualification are Separate Issues

The guidance in this section is very important and should be given greater consideration throughout the RIS. See comments for Section 2.0.

7.0 CORRECTIVE ACTION

7.1 The Current Licensing Basis and 10CFR50, Appendix B

According to this section, in instances when a risk significant SSC (as defined in the licensee's 10CFR50.65(a)(4) program) is degraded or nonconforming, a risk assessment equivalent to that performed in accordance with 10CFR50.65(a)(4), should be completed to determine the potential change in the plant's risk profile. While such risk assessments may be appropriate if the SSC is inoperable or if maintenance activities or compensatory actions are involved, it is unclear what benefit such risk assessments would provide for SSCs that are fully operable but degraded/nonconforming and do not involve compensatory actions or maintenance activities. Without a corresponding benefit to safety, such risk assessments are unnecessary and burdensome.

7.2 Timing of Corrective Actions

The guidance regarding the resolution of degraded/nonconforming conditions at the first available opportunity indicates that safety significance should be taken into consideration. As such, not all SSCs that are degraded or nonconforming represent conditions adverse to quality nor do they require entry into the operability process. Thus, it would benefit licensees if the guidance provided specific examples that warrant NRC follow-up. For example, reliance on a compensatory measure or operator action for operability should be an important consideration in establishing the reasonable time frame for completing corrective actions necessary to resolve degraded/nonconforming conditions.

7.3 Compensatory Measures

This section should note that compensatory actions should not be used as a means to justify actions which create degrading or nonconforming conditions unless it can be verified that the system will continue to perform its specified safety function(s) and that all applicable Technical Specification requirements will continue to be met. See comments in Section 1.0 for additional information.

ATTACHMENT 1
Comments on Draft Regulatory Issue Summary Regarding Revision to Guidance Formally Contained in NRC Generic Letter 91-18

Appendix C: SPECIFIC OPERABILITY ISSUES

C.1 Relationship Between the General Design Criteria and the Technical Specifications

This section should note that design-basis events and regulatory requirements may have plant-specific considerations related to TS operability requirements and that system operability requirements in TS should be consistent with the safety analysis of specific design-bases events and regulatory requirements. For example, GDC 19 requires that the Control Room Area Ventilation System (CRAVS) be designed to maintain the control room environment for 30 days of continuous occupancy after a Design Basis Accident (DBA) without exceeding 5 rem whole body dose or its equivalent to any part of the body. According to TS, the 5 rem limit is also a condition of CRAVS operability. Thus, in some cases, the inability to satisfy the design criteria of the GDC may have a direct relationship to TS operability requirements.

C.4 Use of Alternative Analyses in Operability Determinations

This section is an excellent addition to the guidance document. Furthermore, it is consistent with existing guidance which allows an operability determination to be based on analysis, test, partial test, experience with operating events, engineering judgment, or a combination of these factors taking into consideration equipment operability requirements.

C.5 Use of Manual Action in Place of Automatic Action

This section should note that compensatory actions should not be used as a means to justify actions which create degrading or nonconforming conditions. See comments in Sections 1.0 and 7.3 for additional information.

C.11 Flaw Evaluation

This section states that any system under the jurisdiction of the ASME code containing a through-wall flaw is inoperable. However, section C.12 notes that Code Case N-513-1 describes an acceptable method for evaluating through-wall leakage in Class 2 or 3 moderate energy piping. Also, section C.4 notes that alternate analyses may be used to justify operability. This section should be rewritten to update the guidance and to clarify expectations. It is overly burdensome on the NRC and licensees to declare a system inoperable if facture mechanics and/or other analysis methods approved by the NRC can be used to demonstrate that the system containing the flaw can perform its specified functions under the applicable accident analysis scenarios. The guidance should also note the importance of communicating with the NRC when such conditions arise and the need to promptly submit relief requests when repairs activities must be deferred or other requirements cannot be met.

C.12 Operational Leakage

It is not clear if this guidance only concerns the reactor coolant system or other systems containing through-wall leaks. If the guidance is intended to address the structural integrity of any ASME Code Class 1, 2, or 3 components, then this section should be re-titled and reworded to clarify scope.

C.14 Use of Alternate Source Term in Operability Determinations

The guidance in this section is an excellent addition to the guidance document. Furthermore, it is consistent with existing guidance which allows an operability determination to be based on analysis, test, partial test, experience with operating events, engineering judgment, or a combination of these factors taking into consideration equipment operability requirements. The NRC should consider adding this guidance to section C.4.