



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 29, 1999

Mr. H. B. Barron
Vice President, McGuire Site
Duke Energy Corporation
12700 Hagers Ferry Road
Huntersville, NC 28078-8985

SUBJECT: REPLY TO DUKE ENERGY CORPORATION'S RESPONSE TO TIA 98008,
MCGUIRE UNITS 1 AND 2 (TAC NOS. MA5740 AND MA5741)

Dear Mr. Barron:

Your letter of August 30, 1999, indicated disagreement with the staff's findings on TIA 98008, which addressed McGuire Nuclear Station's use of manual compensatory actions to maintain the control room area ventilation system (CRAVS) operable during maintenance and test activities involving a breach of the control room boundary (the so-called "three-minute rule"). A copy of this TIA response memorandum (originally issued on March 31, 1998) was attached to NRC Inspection Report 50-369,370/99-03, dated June 2, 1999, for McGuire Nuclear Station. Also, NRC Inspection Report 50-413,414/99-03, dated July 1, 1999, informed Duke Energy Corporation (Duke), that the TIA response applied to Catawba Nuclear Station. In the TIA response, the staff concluded that McGuire's use of compensatory actions on the CRAVS is a violation of the technical specifications (TS).

At the June 18, 1999, meeting between NRC and Duke, with Nuclear Energy Institute (NEI) participation, it was agreed that:

1. Duke would review their compliance position and determine whether they would submit TS amendments modeled after TS Task Force (TSTF-287) criteria.
2. NEI would solicit industry-wide input regarding this issue, including the interpretation of TS Surveillance Requirement (SR) 3.0.1.
3. Duke would ask the Licensing Action Task Force to review the TIA process and TS SR 3.0.1.
4. The NRC staff would work toward acceptance of industry's TSTF-287 criteria.

The staff has granted McGuire emergency (one-time-only approval) and exigent (permanent approval) license amendments to permit continued operation for 24 hours in the event of a degraded control room boundary. With the approval of the permanent amendments, the staff considers the specific issue regarding the "three-minute-rule" at McGuire resolved. Similar amendments are needed to resolve the same issue for Catawba. Also, the staff has not received any other inputs relative to items 2 and 3, above, from the June 18, 1999, meeting.

NRC FILE CENTER COP

PDRADOCK,

DF01

H. B. Barron

- 2 -

Upon further review, the staff has determined that our interpretation of TS SR 3.0.1 does not constitute a new staff position, as Duke contends, but rather is fundamental to TS usage. Therefore, the staff stands by the conclusions reached in its evaluation of TIA 98008. The Enclosure addresses in detail the issues raised in your letter.

This completes our follow-up effort on TIA 98008 and TAC Nos. MA5740 and MA5741. If you have any further questions regarding this issue, please contact Frank Rinaldi at (301) 415-1447.

Sincerely,

A handwritten signature in cursive script that reads "Herbert N. Berkow".

Herbert N. Berkow, Director
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosure: As stated

cc w/encl: See next page

McGuire Nuclear Station

cc:

Ms. Lisa F. Vaughn
Legal Department (PBO5E)
Duke Energy Corporation
422 South Church Street
Charlotte, North Carolina 28201-1006

County Manager of
Mecklenburg County
720 East Fourth Street
Charlotte, North Carolina 28202

Michael T. Cash
Regulatory Compliance Manager
Duke Energy Corporation
McGuire Nuclear Site
12700 Hagers Ferry Road
Huntersville, North Carolina 28078

Anne Cottingham, Esquire
Winston and Strawn
1400 L Street, NW.
Washington, DC 20005

Senior Resident Inspector
c/o U.S. Nuclear Regulatory Commission
12700 Hagers Ferry Road
Huntersville, North Carolina 28078

Dr. John M. Barry
Mecklenburg County
Department of Environmental
Protection
700 N. Tryon Street
Charlotte, North Carolina 28202

Mr. Steven P. Shaver
Senior Sales Engineer
Westinshouse Electric Company
5929 Carnegie Blvd.
Suite 500
Charlotte, North Carolina 28209

Ms. Karen E. Long
Assistant Attorney General
North Carolina Department of
Justice
P. O. Box 629
Raleigh, North Carolina 27602

L. A. Keller
Manager - Nuclear Regulatory
Licensing
Duke Energy Corporation
526 South Church Street
Charlotte, North Carolina 28201-1006

Elaine Wathen, Lead REP Planner
Division of Emergency Management
116 West Jones Street
Raleigh, North Carolina 27603-1335

Mr. Richard M. Fry, Director
Division of Radiation Protection
North Carolina Department of
Environment, Health and Natural
Resources
3825 Barrett Drive
Raleigh, North Carolina 27609-7721

Mr. T. Richard Puryear
Owners Group (NCEMC)
Duke Energy Corporation
4800 Concord Road
York, South Carolina 29745

REPLY TO DUKE ENERGY CORPORATION'S RESPONSE TO TIA 98008,
"THREE-MINUTE-RULE" FOR OPERABILITY OF CONTROL ROOM VENTILATION,
MCGUIRE UNITS 1 AND 2

Introduction

In a memorandum dated March 31, 1999, from Suzanne C. Black, NRR, to Loren R. Plisco, Region II, the staff responded to task interface agreement (TIA) 98008. This TIA addressed McGuire Nuclear Station's (McGuire's) use of manual compensatory actions to maintain the control room area ventilation system (CRAVS) operable during maintenance and test activities involving a breach of the control room boundary. A copy of this TIA response memorandum was attached to NRC Inspection Report 50-369,370/99-03 dated June 2, 1999, for McGuire. In NRC Inspection Report 50-413,414/99-03 dated July 1, 1999, the staff informed the licensee, Duke Energy Corporation (Duke), that the TIA response also applied to Catawba Nuclear Station. In the TIA response, the staff concluded that McGuire's use of compensatory actions on the CRAVS is a violation of the technical specifications (TS). However, as stated in Inspection Report 50-369,370/99-03 (Unresolved Item (URI) 50-369,370/96-10-05), this issue remains open pending additional NRC review. By letter dated August 30, 1999, from H. B. Barron (Duke) to Herbert N. Berkow (NRR), Duke responded to TIA 98008. The purpose of this evaluation is to address the issues contained in that letter.

Background

McGuire's design basis accident control room operator dose calculation assumes that the CRAVS automatically starts and pressurizes the control room within three minutes following receipt of an emergency core cooling system (ECCS) actuation signal. No credit is taken by the licensee's dose analysis for control room pressurization during the first three minutes. The capability to meet the control room pressurization assumption is periodically demonstrated during performance of TS surveillance requirement (SR) 3.7.9.4, for McGuire (SR 3.7.10.4 for Catawba). Although not specifically mentioned in the surveillance acceptance criteria, performance of the surveillance also verifies the ability to pressurize the control room in three minutes. During maintenance or testing involving a breach of the control room boundary, Duke believes it satisfies the surveillance acceptance criterion related to the pressurization assumption (0.125 inches water column with a makeup flow of ≥ 2200 cfm) by implementing manual compensatory actions. In the event of an ECCS actuation (signifying the start of a design basis event), control room operators would direct a designated person to manually close the breach within 3 minutes; hence the term "three-minute-rule." Duke bases the regulatory conformance of such manual compensatory actions on guidance in Section 6.7, Use of Manual Action in Place of Automatic Action, of NRC Manual Chapter 9900: "Technical Guidance, Operable/Operability: Ensuring the Functional Capability of a System or Component," dated October 31, 1991.

Since Region II opened URI 50-369,370/96-10-05 in 1996, McGuire and Catawba have completed conversion of their TS to improved TS (ITS) based on NUREG-1431, "Standard Technical Specifications Westinghouse Plants," Revision 1, April 1995. McGuire implemented the ITS on November 14, 1998; Catawba on January 31, 1999. With minor editorial

Enclosure

enhancements, SR 3.0.1 retained the original statement of the corresponding previous requirement, TS 4.0.1, but contained an additional clarifying statement, given in italics below. SR 3.0.1 also retained the first and the last sentences of previous TS 4.0.3. The following comparison shows the correspondence between the previous and present language.

Previous TS Requirements:

SR 3.0.1:

- | | |
|---|---|
| 4.0.1 Surveillance Requirements shall be met during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement | SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. <i>Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO.</i> |
| 4.0.3 [first sentence] Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. | Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. |
| 4.0.3 [last sentence] Surveillance Requirements do not have to be performed on inoperable equipment. | Surveillances do not have to be performed on inoperable equipment or variables outside specified limits. |

In its May 27, 1997, application for amendment to convert to the ITS, Duke characterized the above revisions as administrative changes. In particular, it stated that the second statement in SR 3.0.1 was added to clarify the intent of previous TS 4.0.1. In addition, Bases were established to further explain the intent of these words. Therefore, staff positions which are supported by the language of SR 3.0.1 and associated Bases, as discussed in this memorandum, were applicable at the time URI 50-369,370/96-10-05 was opened.

The CRAVS pressurization test SR 3.7.9.4, which is the subject of this TIA, corresponds to previous McGuire TS 4.7.6.e.3. This test and the acceptance criterion of pressurizing the control room to 0.125 inches water column was retained with minor editorial clarifications as an administrative change in converting to the ITS.

Staff Position

In accordance with SR 3.0.1, the control room pressurization acceptance criterion must be satisfied whenever Limiting Condition for Operation (LCO) 3.7.9 (3.7.10 for Catawba), "Control Room Area Ventilation System (CRAVS)," is required to be met. An intentional breach of the control room boundary renders the CRAVS incapable of meeting this criterion. LCO 3.7.9 can not be considered as being met when it is known that this criterion cannot be satisfied, regardless of any compensatory actions the licensee may have implemented. This conclusion

need not be based on an actual demonstration that the criterion cannot be satisfied, i.e., through performing the pressurization surveillance. The Bases for SR 3.0.1 clearly support this interpretation, which is consistent with the plain-language meaning of SR 3.0.1. Therefore, the staff finds that McGuire's past use of compensatory actions on the CRAVS is a violation of the TS.

Duke Position

In a meeting to discuss this issue on June 18, 1999, Duke disagreed with the staff concerning the meaning of SR 3.0.1 as it applies to the control-room pressurization surveillance. In its letter to the NRC dated August 30, 1999, Duke summarized its interpretation of SR 3.0.1, and claimed that the staff's position constitutes a new or different regulatory interpretation. The disagreement centers on the following sentence from SR 3.0.1:

Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO.

Duke stated its understanding of the NRC's implied interpretation of this sentence as follows:

If a licensee could not meet a surveillance in a temporary condition, ignoring manual compensatory actions, then the safe shutdown component (SSC) is inoperable.

Duke stated it could not find any regulatory guidance documenting this interpretation. Duke then paraphrased its understanding of the above quoted sentence from SR 3.0.1, as follows:

A failure to meet an acceptance criteria of a surveillance test is a failure to meet the limiting condition for operation (LCO) regardless of when the measurement is taken.

Duke then stated that, "An evaluation of surveillance 'acceptance criteria' can only be performed when there is an actual measurement or observation as appropriate. Meeting this requirement presumes that an actual surveillance measurement or observation was taken for comparison to the acceptance criteria." Using this logic, Duke stated its interpretation of the above quoted sentence in SR 3.0.1:

A failure to meet an LCO exists, if a surveillance test is conducted and acceptance criteria are not met regardless of when the measurement or observation was made by the licensee.

Duke then claimed that [its understanding of] the staff's position "requires the licensee to assume that a Surveillance was performed, while ignoring any existing manual actions, and postulating what the measured parameter would be in comparison to the acceptance criteria."

Staff Response

The staff disagrees with Duke's characterization of the staff's interpretation of SR 3.0.1. Inability to satisfy a surveillance acceptance criterion because of a degradation of an SSC

means that the associated LCO is not met. Nothing in the staff's guidance on operability and the use of manual action to compensate for automatic action permits a licensee to avoid fulfillment of the TS. In addition, the position that performance of the surveillance is always required before one can ever know that a surveillance acceptance criterion is not satisfied is incorrect. The present example of an intentional breach of the control room boundary clearly demonstrates that this view is incorrect. Finally, the appropriate regulatory guidance for understanding the meaning of SR 3.0.1 in the McGuire and Catawba TS is the following excerpt from the SR 3.0.1 Bases:

Nothing in this Specification, however, is to be construed as implying that systems or components are OPERABLE when:

- a. The systems or components are known to be inoperable, although still meeting the SRs; or
- b. The requirements of the Surveillance(s) are known not to be met between required Surveillance performances.

There is no staff guidance to permit using manual compensatory actions to maintain the operability of a system with an intentional (or unintentional) system degradation which prevents meeting a surveillance acceptance criterion. Neither TS SR 3.0.1 and its Bases, nor the above noted manual chapter on operability discuss using manual compensatory actions in this manner. While the manual chapter does discuss the possibility of maintaining a degraded system operable through the use of manual action in place of automatic action, it does not allow substituting manual for automatic action if the degraded or non-conforming condition prevents meeting a surveillance acceptance criterion.

Recently, emergency (one-time-only approval) and exigent (permanent approval) license amendments were granted for McGuire Units 1 and 2 to permit continued operation for 24 hours in the event of a degraded control room boundary. With the permanent changes of the exigent amendments, the specific issue regarding the "three-minute-rule" at McGuire is resolved. Similar amendments are needed to resolve the issue for Catawba.

The staff believes that its application of SR 3.0.1, in this instance, does not constitute a new staff position, as Duke contends, but rather is fundamental to TS usage and should be well understood.

Conclusion

The staff has reviewed Duke's comments on the response to TIA 98008. Based on this review, the staff stands by the conclusions reached in its response to TIA 98008.

Principal Contributor: C. Craig Harbuck

Date: November 29, 1999

H. B. Barron

- 2 -

November 29, 1999

Upon further review, the staff has determined that our interpretation of TS SR 3.0.1 does not constitute a new staff position, as Duke contends, but rather is fundamental to TS usage. Therefore, the staff stands by the conclusions reached in its evaluation of TIA 98008. The Enclosure addresses in detail the issues raised in your letter.

This completes our follow-up effort on TIA 98008 and TAC Nos. MA5740 and MA5741. If you have any further questions regarding this issue, please contact Frank Rinaldi at (301) 415-1447.

Sincerely,

ORIGINAL SIGNED BY:

Herbert N. Berkow, Director
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosure: As stated

cc w/encl: See next page

Distribution:

File Center	WBeckner	GGrant, RIII
PUBLIC	CHaruck	KBrockman, RIV
PDII-1 Reading	CCarpenter	GPeterson, Duke
JZwolinski	EMcKenna	
HBerkow	JLuehman	
REmch	JHannon	
CHawes	HWalker	
FRinaldi	JTatum	
OGC	PTam	
ACRS	RBlough, RI	
PSkinner, RII	JBarnes, RII	

DOCUMENT NAME: G:\PDII-1\MCGUIRE\tia99008.wpd *See previous concurrence

To receive a copy of this document, indicate in the box C=Copy w/o attachment/enclosure E=Copy with attachment/enclosure N = No copy

OFFICE	PDII-1/PM*	PDII-1/LA*	RTSB*	RGN II*	PDII-1/SC*	PDII/D*	DD/DLPM*
NAME	FRinaldi:mw	CHawes	WBeckner	COgle	REmch	HBerkow	SBlack
DATE	11/19/99	11/19/99	11/22/99	11/19/99	11/29/99	11/29/99	11/23/99

OFFICIAL RECORD COPY