

August 1, 2001

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - APPLICATION FOR
CHANGES TO TECHNICAL SPECIFICATIONS - MCGUIRE NUCLEAR
STATION, UNITS 1 AND 2 (TAC NOS. MB1261 AND MB1262)

Dear Mr. Barron:

The Nuclear Regulatory Commission is reviewing your application dated February 14, 2001, as supplemented May 30, 2001, proposing changes to the Technical Specifications for the engineered safety feature actuation system instrumentation, the reactor coolant system pressure and temperature limits and the low temperature overpressure protection system and has identified a need for additional information as identified in the enclosure. These issues were discussed with your staff on July 26, 2001. Please provide a response to this request within forty-five (45) days of receipt of this letter so that we may complete our review.

Sincerely,

/RA/

Robert E. Martin, Senior Project Manager, Section 1
Project Directorate
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosure: Request for Additional Information

cc w/encl: See next page

August 1, 2001

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - APPLICATION FOR
CHANGES TO TECHNICAL SPECIFICATIONS - MCGUIRE NUCLEAR
STATION, UNITS 1 AND 2 (TAC NOS. MB1261 AND MB1262)

Dear Mr. Barron:

The Nuclear Regulatory Commission is reviewing your application dated February 14, 2001, as supplemented May 30, 2001, proposing changes to the Technical Specifications for the engineered safety feature actuation system instrumentation, the reactor coolant system pressure and temperature limits and the low temperature overpressure protection system and has identified a need for additional information as identified in the enclosure. These issues were discussed with your staff on July 26, 2001. Please provide a response to this request within forty-five (45) days of receipt of this letter so that we may complete our review.

Sincerely,

/RA/

Robert E. Martin, Senior Project Manager, Section 1
Project Directorate
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosure: Request for Additional Information

cc w/encl: See next page

DISTRIBUTION:

PUBLIC	B. Martin	ACRS
PDII-1 Reading	C. Hawes	C. Ogle, RII
T. Marsh	L. Berry	
R. Emch	OGC	

Accession Number: ML012080042

OFFICE	PDII-1/PM	PDII-1/LA	PDII-1/SC
NAME	RMartin	CHawes	REmch
DATE	08/01/01	08/01/01	08/01/01

OFFICIAL RECORD COPY

REQUEST FOR ADDITIONAL INFORMATION
REACTOR COOLANT SYSTEM HEATUP AND COOLDOWN CURVES
MCGUIRE NUCLEAR STATION, UNITS 1 and 2
DUKE ENERGY CORPORATION

Reactor Systems

1. Limiting Condition for Operation (LCO) 3.4.12 specifies a Power Operated Relief Valve (PORV) lift setting of 385 pounds per square inch gauge (psig). However, in Tables 3 and 8 of Attachment 3 to Duke Energy Corporation's (DEC's) letter dated February 14, 2001, "Description of the Proposed Changes and Technical Justification," the nominal PORV setpoint is shown to be 380 psig. The peak pressures for various transients shown in these tables and the "LTOP Setpoint + Max Overshoot & All Uncertainties" lines in Figures 1 and 2 appear to be based on the PORV setpoint of 380 psig. How do the conclusions derived from them support the PORV setpoint of 385 psig?
2. DEC's letter dated May 30, 2001, replaced WCAP-15192 and WCAP-15201, "Heatup and Cooldown Limit Curves for Normal Operation", for McGuire Units 1 and 2, respectively, with revision 1 of these topical reports. The pressure/temperature (P/T) limits have been revised slightly. Since the evaluation of the PORV setpoint provided in Attachment 3 of the February 14, 2001, letter was based on the P/T limits from the original topical reports, would the revised P/T limits affect the conclusion drawn from the original limits? Why?
3. Sections 3.4.2.4 and 3.4.3.4 of Attachment 3 to the February 14, 2001, letter state that the peak vessel pressure, with the residual heat removal system (RHR) at maximum relieving capacity, is approximately 560 psig for both McGuire Units 1 and 2, which is described in detail in the low temperature overpressure protection (LTOP) calculation.
 - a. Provide a description of this calculation, including the method of calculation and the assumptions on the mass input, operation of the PORV and the RHR suction relief valve.
 - b. What is the basis for using the maximum relieving capacity of the RHR suction relief valve for the vessel peak pressure calculation?
4. In the determination of the restrictions on the cold leg temperature and the cooldown rate for the use of the RHR suction relief valve, Sections 3.4.2.4 and 3.4.3.4 appear to assume the instrumentation uncertainty for the reactor coolant system (RCS) temperature to be 12°F to 14°F. What is the basis for this number?
5. For LCO 3.4.12, when Condition A occurs with any combination of two charging or safety injection pumps capable of injecting into the RCS, several required actions are specified. You proposed to add a fifth required action:

"A.5.1 Depressurize RCS and establish RCS vent of ≥ 2.75 square inches.

AND

A.5.2 Verify two PORVs are Operable."

Section 3.3 of Attachment 3 of the February 14, 2001, letter contends that since either

A.5.1 or A.5.2 constitutes an operable LTOP that protects against one charging pump or safety injection pump capable of injecting into the RCS, the combination of both A.5.1 and A.5.2 would be capable of protecting against any combination of two charging and safety injection pumps capable of injecting into the RCS.

- a. What is the basis of the apparent assumption of a linear relationship between the mass input and relieving capacity in the determination of the peak vessel pressure during transients.
- b. Has an analysis been performed to demonstrate that the required actions of A.5.1 and A.5.2, with any combination of two charging and safety injection pumps injecting into the RCS, result in the P/T limits not being violated? What is the result?

Materials Engineering

DEC proposed an alternative methodology similar to that in WCAP-15315 to replace the current Appendix G requirement on reactor closure head and vessel flange material. The staff does not plan to complete its review of this request until after completion of the review of WCAP-15315. In consideration of the remaining period of effectiveness of the current pressure-temperature curves, DEC may wish to consider whether the appropriate action is to withdraw this exemption request and resubmit it upon resolution of these technical issues, or to propose, in the near future, a revision to the P-T limits using the current Appendix G requirement on reactor closure head and vessel flange material.

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. Peter R. Harden, IV
VP-Customer Relations and Sales
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

Mr. C. Jeffrey Thomas
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