

DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

January 11, 1982

TELEPHONE AREA 704
373-4083

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: McGuire Nuclear Station
Docket No. 50-369



Dear Mr. Denton:

Attachment 1 is a proposed change to the McGuire Nuclear Station Technical Specifications regarding boron concentration in the Boron Injection Tank. The proposed change is for a period of 7 days commencing on January 11, 1982 and running through January 18, 1982. It is requested that this change be expedited since severe power shortages are being experienced in the Southeast. Expeditious granting of this request would permit McGuire to return to power to provide needed capacity during what is expected to be a record peak demand period.

The proposed change has been reviewed and it has been determined that there are no adverse safety or environmental impacts associated with the proposed change.

This change is considered to be a Class III amendment pursuant to 10 CFR 170.22. Therefore, a check in the amount of \$4,000 is enclosed.

Very truly yours,


William O. Parker, Jr.

GAC/jfw
Attachment

cc: Mr. P. R. Bemis
Senior Resident Inspector
McGuire Nuclear Station

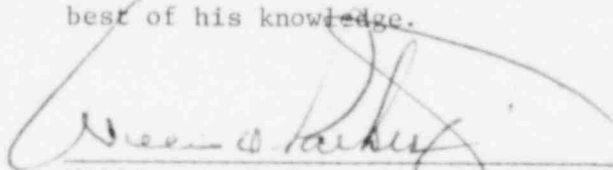
Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

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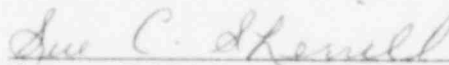
Mr. Harold R. Denton, Director
Page 2
January 11, 1982

WILLIAM O. PARKER, JR., being duly sworn, states that he is Vice President of Duke Power Company; that he is authorized on the part of said Company to sign and file with the Nuclear Regulatory Commission this revision to the McGuire Nuclear Station Technical Specifications, Appendix A to License No. NPF-9; and that all statements and matters set forth therein are true and correct to the best of his knowledge.



William O. Parker, Jr., Vice President

Subscribed and sworn to before me this 11th day of January, 1982.



Notary Public

My Commission Expires:

September 20, 1984

Attachment 1
McGuire Nuclear Station

Technical Specification 3/4.5.4 - Boron Injection System

Proposed Change

Revise 3.5.4.1 b. to read:

"b. Between 2000 and 22,500 ppm of boron, and"

Justification and Safety Analysis

The design function of the Boron Injection Tank (BIT) is to provide concentrated boric acid to the reactor coolant in order to minimize the impact of the reactivity addition resulting from a steam line break accident and the existence of a negative moderator coefficient of reactivity. The core moderator temperature coefficient of reactivity is most negative at core end-of-life, and from the standpoint of core reactivity the accident is most limiting at end-of-life conditions. The existing safety analysis of the steam line break accident is based on a conservatively assumed end-of-life moderator temperature coefficient of $-41 \text{ PCM}/^{\circ}\text{F}$, minimum shutdown margin (1.6%), and a BIT boric acid concentration of 20,000 PCM.

McGuire Unit 1 is currently in beginning-of-cycle 1 operation and has core burnup of approximately 20 EFPD. The moderator coefficient is approximately $-10 \text{ PCM}/^{\circ}\text{F}$. Furthermore, the available core shutdown margin at this time of core operation has a significant margin compared to the value assumed in the safety analysis (3.27% versus 1.6%). With these core parameters, the reactivity transient resulting from a postulated steam line break would be of very little severity compared to the worst case conditions assumed in the safety analysis and that the functioning ECCS with the normal RWST boron concentration of 2000 ppm would adequately mitigate the event. Furthermore, a recent re-analysis of the steam line break accident for end-of-life conditions without considering the functioning of the BIT showed that the accident is safely mitigated. A cursory review of this re-analysis was performed by the NRC resident inspectors Paul Barnett and Paul Bemis.

The foregoing assessment demonstrates that the proposed Technical Specification change reducing the BIT concentration from 20,000 ppm to 2000 ppm does not unduly compromise the safety of plant operation or the health and safety of the public.

Additionally, considering the probability of a steam line break, full power operation with a reduced BIT concentration for a period of one week is acceptable.